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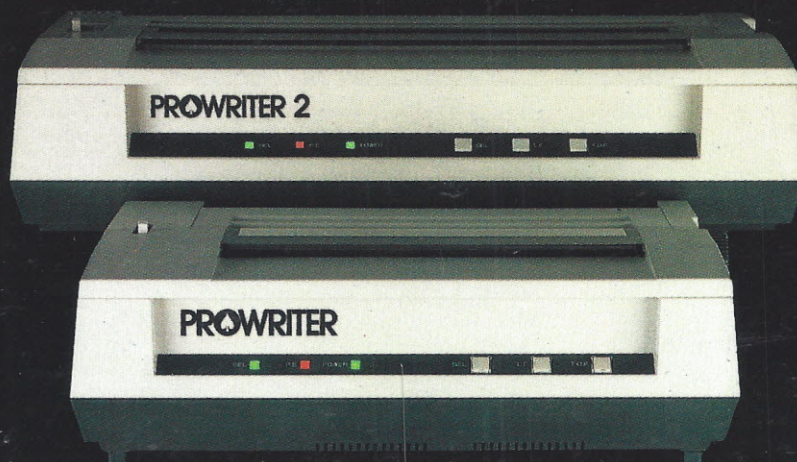
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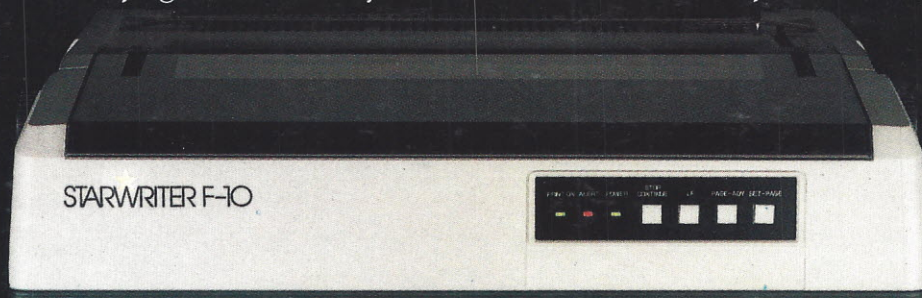
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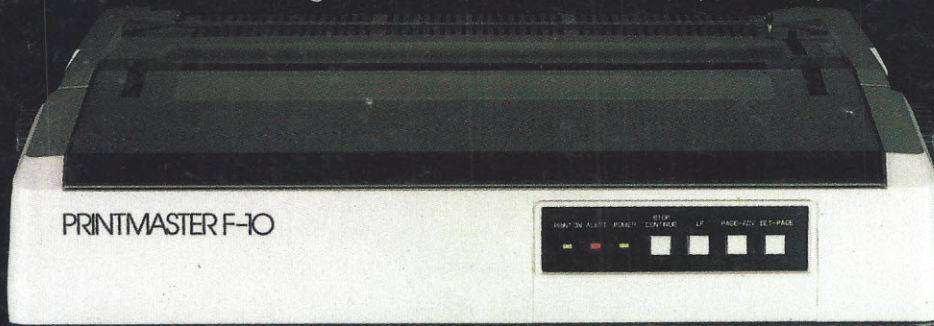
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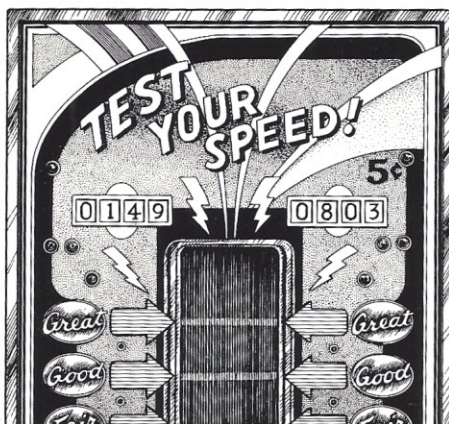
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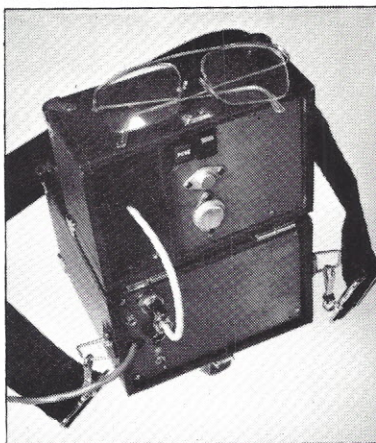


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Start Up

In the beginning there was the word. With the advent of word processing the floodgates of word inflation have finally been thrown open. As I sift through the correspondence this magazine receives each day, an interesting phenomenon has begun to surface. The word processor has made great strides toward eliminating that dreaded malady (cringe) "writer's block." Unfortunately, in some cases the proverbial cure is worse than the complaint.

As I pore over a 1,500 word manuscript that an enthusiastic author has stretched to 4,000, I suspect that editors will pay the price for all this artistic freedom. Imagine the state James Joyce's poor editor would have been in if Joyce had composed *Ulysses* on a word processor. War and Peace might have become War and Peace and The Plight of the Russian Veteran had Tolstoy owned an Osborne 1.

In self defense, I've taken to fantasizing software programs that take up arms against this sea of hyperbole. As voice activators for computers become commonplace why not take this chatty idea a step further. By imbuing the computer with the voice of a figure the writer admires (or fears) overworked editors across the country might be spared the drudgery of the paper avalanche.

John Houseman, for example, could enunciate from the computer's voice box when a young attorney went astray with a not-so-concise legal brief. Houseman's ascerbic "we are in the business of law, Ms. Clark, not scholarly research," would swiftly bring her back in line.

When an overexcited romance writer wandered off the garden path, Danielle Steele or Barbara Cartland could skillfully reprimand her. "Enough conversation honey, get them into bed." The ghost of Raymond Chandler could wearily admonish the digressive detective writer "Quite with the loving descriptions of the frail and get to the point buddy."

Certain distinctive voices would be especially effective in my scenario. Truman Capote's wincing whine ("Really darling, your use of hyperbole is too precious") would definitely curb any temptation to pontificate. A special feature could be offered for academics by which an intimidating professorial voice would interject "No thesis, no thesis," causing the computer to promptly eat your words.

Of course too much of a good thing could be dangerous. Instead of "user friendly" programs we could end up with "user abusive." And after all, an editor could be plagued with the opposite problem: a lack of material. Without the computer, weary writers would still be hunting and pecking their way through a 1,500 word piece with 344 typos and sporadic weak transitions. The editor could no longer slip in the diskette and blip out an offending passage. A distinct advantage.

Nevertheless, in a case where the medium is in danger of drowning the message, the "abusive editor" could prove an indispensable aid. Now, how about a program for insensitive, ungrateful editors?

Jackie Rae
Editor

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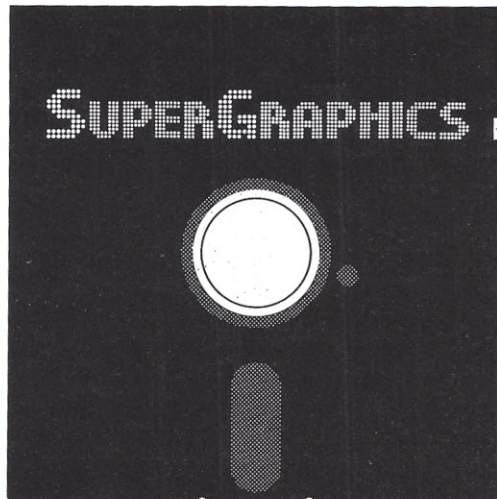
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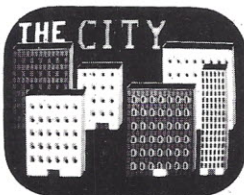
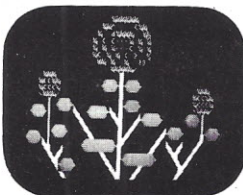
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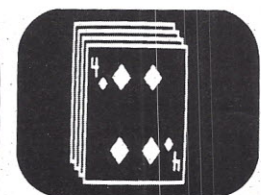
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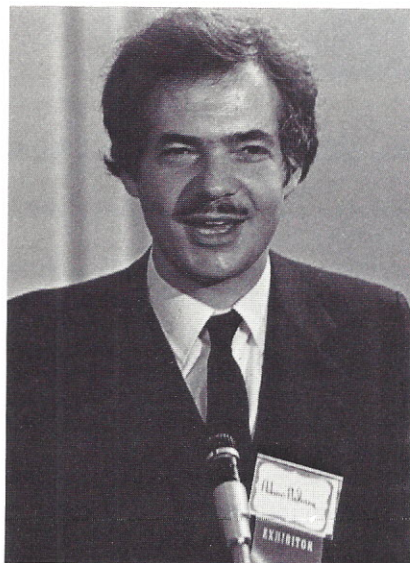
*from the
Fountainhead*

Will micros eliminate “typing phobia”

Adam Osborne

Word processing is one of those fancy terms that we attach to a relatively simple task: typing.

But there are some interesting ramifications to the use of microcomputers in word processing. Specifically these ramifications will have more impact than any other aspect of microcomputers in changing the white collar work place.



Nowadays typing is left to secretaries. Very few white collar professionals ever bothered learning how to type. They stumbled through school without this skill and now hide behind the lame excuse that they don't know how to type; there is something mildly perverse about this

admission. While apologizing for an inadequacy, the statement seems to imply: “I am the better for it.”

No one who cannot type is the better for it.

Until the arrival of word processing, white collar workers could delegate typing to secretaries because typing was not only slow, but also tedious, in that most typists make mistakes that need to be corrected.

This problem feeds on itself. People who had never learned how to type were terrified of a typewriter because errors were so frequent and so time consuming to correct. To avoid errors you had to not only learn how to type but to keep practicing. A white collar worker who would have happily typed two or three letters a day could not afford to spend the added time that keeping up good typing skills requires.

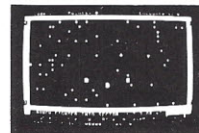
Now that has all changed.

You can be a lousy typist but given a word processor it hardly matters. If you make one mistake in ten key strokes, you will still get your letter written in roughly the same amount of time as the world's best typist. Moreover the white collar worker typing his or her own letter on a word processor would probably skip one or two editing steps and get the job done even faster.

Suddenly the economic imperative moves from having secretaries type to having white collar workers do their own typing-via a word processor.

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Starbase Commander

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You decide where to launch your fighters. Then clear a sector of enemy battle cruisers and launch a robot refueling ship to resupply your fighter before you run out of fuel or weapons. There is even a 'help' screen.

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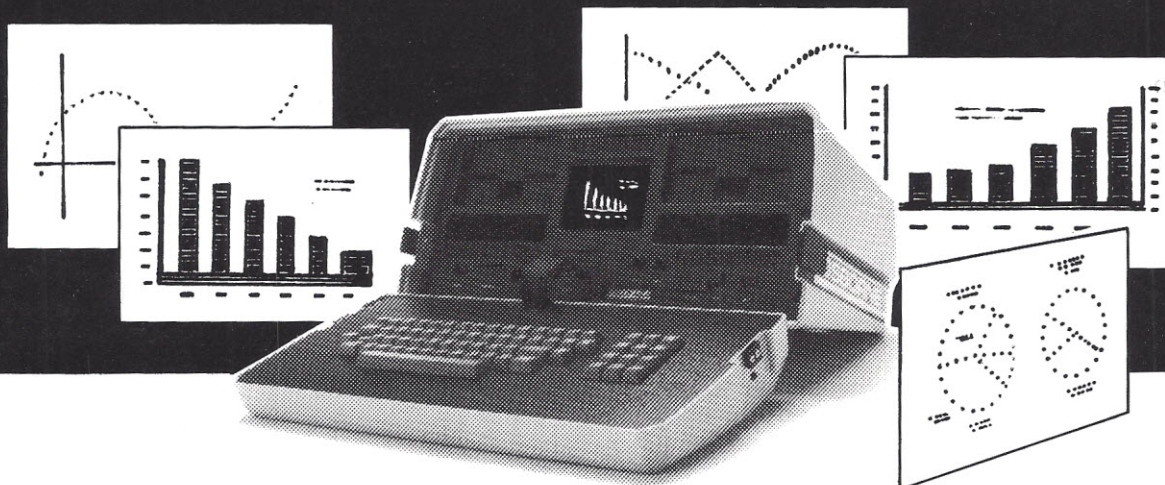
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from the Fountainhead

What is really interesting about this scenario is the fact that people normally talk about computer phobia. And yet it is microcomputers that will likely eliminate typing phobia.

Someone who cannot type approaches a typewriter keyboard with terror, quite certain that they cannot possibly type an entire document error free and uncertain as to the effectiveness of their error correction. Now, suddenly errors don't count and they can approach the keyboard with all the naive enthusiasm of a child learning how to speak and not caring when people laugh at their speech mistakes.

But the economic imperative of word processing still is influenced by the difference between the cost of a word processor as compared to a typewriter.

When a business can buy an electric typewriter for \$1000 dollars, while a word processor (with printer) costs at least \$3,000, the business will continue buying electric typewriters.

In the home people will buy \$300 typewriters and continue doing so until word processors approach this low price. The day when all typewriters will be replaced by microcomputer word processors is therefore, a few years away.

But the typewriter industry had better keep an eye over its shoulder.

(Dr. Adam Osborne is currently penning a science fiction book when he can find time away from his corporate responsibilities. He hopes to complete "Opiates of the Intellect" sometime in the next few months.)



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Letters



SuperCalc Tip

It's Thanksgiving morning. No work today, and lots of time to play with the new Osborne; dedicated uninterrupted time. So what should I do? The IRS is going to insist on some justification for the deduction, so why not set up a *SuperCalc* template for income and expenses?

Figure out the *SuperCalc* template, and enter the data. An hour's worth of work suggests saving what's been done, so `"/SAVE,B:TAX-DATA<RETURN>."` Three microseconds after `"RETURN"`, I realize that there's no diskette in drive B. Contemplate the empty drive spinning, the glow of the drive light, wait for the dreaded `"BDOS ERR ON B: BAD SECTOR"`. What do I do to recover? Maybe putting a data diskette in B and hitting `RETURN` will do the trick. A fool's wish. `"BDOS ERR ON B: R/O."`

Finally a stroke of inspiration. Perhaps *ESCAPE* will help. The good program designers at Sorcim gave me a beautiful message: An error occurred on the previous disk operation. But I'm back in the program, the data's still there, and I can now save it correctly. My time isn't wasted after all.

My background is operating and compiling system software on large mainframes. I'm not used to programs that let me recover from stupid mistakes with little effort. Con-

gratulations to Sorcim for developing a superior product and to Adam Osborne for selecting and supplying that software with the hardware he gives away.

Tom Briggum
Virginia Beach, VA

Mad Comics

Your magazine is a delight—a great mixture of advanced and down to earth articles. Can't wait for it to be monthly.

The first two issues really set the tone, with their provocative covers, emphasizing the Osborne's portability and uniqueness. Now comes the October tacky Mad Comics cover. My family turns the magazine upside down if I leave it around. Even my niece says YUK when she see it! Please go back to the classy covers.

Sally Van Natta
Santa Barbara, Calif.

Seeing is Believing

You have a great magazine; I enjoy it even though I ended up buying an S-100 CP/M system. The reason I didn't buy an Osborne is the 52 character display. Although it's true there's nothing sacred about 80 characters, let's face it, 52 is just too narrow for word processing. Although Thom Hogan recommended an 80 character terminal in the CP/M User's Guide, claiming that 64 aren't really enough, I would have been satisfied with that.

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Letters

One of the big advantages of *WordStar* is "what you see is what you get"; you shouldn't have to give up that advantage just to make your text fit on a too-small screen. The alternative, actually maintaining a text line of 65 or 70 characters, requires continued back and forth scrolling; sure the Osborne will do it, but you'll go cross-eyed reviewing anything longer than a couple of paragraphs. It's too bad that it's taken so long to implement a wider screen, although KayComp seemed to readily manage it. Now that it's finally coming, perhaps the controversy will end when people can actually see what they've been missing.

Jack Ludwick
Arlington, VA

P.S.

A few comments regarding my "Two And A Half Utilities For dBase II" as published in the October-November issue of *The Portable Companion*:

1. New *dBase II* users should understand an important effect of the "It" programs. It is very desirable to maintain specific project related programs and data on the B diskette—not the disk containing the *dBase* operating system. This is made simple by typing "Set Default To B." Both of the "It" programs automatically change disk default.

Once the default is set to B, all of your CMD, FMT, and DBF files will be read from and written to the B diskette.

2. These programs are created using the "Modify Command." The first of these programs should be named A:IT, the second, A:ITT, and the third A:SWITCH. After each program is entered, type Control W to get back to the *dBase* monitor.

3. The second set-up program, (which should be labeled "ITT", not "IT") deserves some description. I have found that on a given day I am frequently switching between *dBase*, *WordStar*, etc. When I enter *dBase*

for the first time on a given day I type "Do IT" and correct the date. On subsequent entries into *dBase*, I type "Do ITT", the correct date is already installed, and I am delivered directly to my B diskette.

4. The "Switch" program is designed to be on the A diskette.

5. The user should rename *dBase*, Com to Do.Com as suggested in the Ashton-Tate manual.

These additional comments should make these utilities more useful to your readers.

Willis Grant
Encino, CA

Take my wife

I am delighted with my most recent investment. I recently sold my Apple to purchase an Osborne. The portability was a major factor—my wife is not overly pleased with the idea of me setting up a computer in the house. Now, when I sense she is tiring of my activities I simply pack it up. Also, I anticipate using it in my work.

I am Senior Vice President and Comptroller of Bank South Corporation (a \$7.5 billion bank holding company in Atlanta). Just last week, I convinced the CEO to give me \$75,000 "seed" money to begin bringing in personal computers. Osborne is at the top of the list.

I was delighted to receive my first "The Portable Companion." It is excellent. I have one complaint—can I possibly receive #1. My free copy was #2. Also I would like to bring a discrepancy to your attention. The subscription cards indicate that the subscription rate is \$12.50 (a 30% savings), however, the circulation disclosure on page 4 (August/September) clearly indicates that "Subscriptions are \$9.50 for six issues." Whoops!

Thanks for providing me a way of enjoying my hobby and still keep my wife!

Jeff Warlick
Atlanta, GA

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Letters

sold out of the premiere issue of The Portable Companion (June/July) and cannot send any more copies out. Our early owners should also be aware that the cut off date for receiving a complimentary copy of the magazine is February 28. If you have not received your complimentary copy (as of September each new owner receives one packed with the machine) be sure to notify us before that date (and include your serial number).

With regard to the mistake in the circulation disclosure pointed out by Mr. Warlick, this was an error. The actual subscription rate was \$12.50; the rate is now \$25 for 12 issues. We apologize for any confusion caused by the discrepancy.

In Rebuttal

The December/January issue of *The Portable Companion* contains a letter-to-the-editor on the subject of WRITE TRACK, a manuscript tracking system offered for sale by Gradan Consulting Company of Thousand Oaks, California. The letter was written by a Mr. Adam Thomson of Fayetteville, North Carolina, and presents an unfair, negative, image of my product.

In September 1982 I received a handwritten letter from Mr. Thompson in which he stated that he had a check already made out to Gradan Consulting Company but it was "posted on [my] wall" and would remain there until Gradan proved itself worthy of its receipt. He indicated that before sending off his check for \$100, he decided to investigate my company. His method was to use the telephone. Gradan Consulting Company is not listed in the telephone directory and he, therefore, concluded that it was a sham. His letter was distinctly unfriendly and even threatening (e.g., "... I warn ya [sic], I can be pretty nasty when I smell something fishy. I have reported this to the Osborne folks.")

I responded immediately with a let-

ter written in a tone which demonstrated by mixed feelings: I was pleased that he was interested in my product but dismayed at being judged guilty of fraud without being given a chance to prove otherwise. As I explained to Mr. Thompson, Gradan Consulting Company is a freelance business. It is not listed in the telephone directory because the telephone company charges exorbitant rates for such listings. I am listed personally, though.

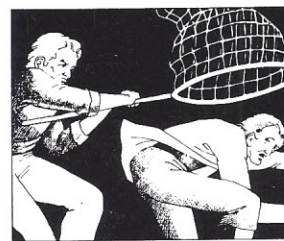
I offered Mr. Thompson this explanation, included a business card with my home telephone number on it (advising him that it would be hooked up to an answering machine during the normal work day), and suggested that he purchase the user manual for \$10. He could later apply that amount to the software purchase, if he decided it satisfied his needs.

The point of this letter is to assure your readers that Gradan Consulting Company is a legitimate, honest business. I respond to all inquiries as soon as possible and am not offering a phony, useless product for sale. WRITE TRACK is, to my knowledge, the only manuscript tracking system on the market: and since the Osborne 1 is a writer's dream machine, this software package can only enhance it. I do not expect, nor even want, to sell WRITE TRACK to someone who has not at least requested more information about it than could possibly appear in any magazine's new products announcement column. I encourage potential customers to purchase the user manual first.

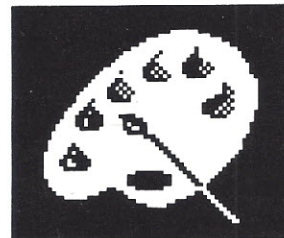
Incidentally, WRITE TRACK will be reviewed in a forthcoming issue of *Infoworld*.

Thank you for publishing this response. If anyone would like any information about WRITE TRACK, I would be happy to answer their questions.

Marilyn Gratton
Gradan Consulting Co.
Thousand Oaks, CA



TRAPPER — You've seen this game on video sets. Try and box in your opponent without running into anything yourself. Ours has some interesting variations. You are represented on the screen by your initial, and there are two speeds used in the game.



ARTIST — A program which explores the Osborne graphics. We developed this program to draw some of our own screens. You can draw, edit, and save screens 52 or 128 characters wide, recall them, and work on them more. The storage format is easy to call into other programs so you can access your screens in an application program. This program also has a hypnotic feature of computer generated art. The computer will draw a screen, let you look at it a moment, then draw another.



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Two wizards are better than one

Thom Hogan and Brad Baldwin

With this issue I'd like to introduce a new Wizard, Brad Baldwin. Brad joined the staff of the magazine in October. Prior to that, he was OCC's technical support correspondent and the person responsible for all the printer interfacing notes we've sent to our dealers.

Brad takes over most of the technical questions that you send in. I'll continue handling the more oblique questions, those concerning Osborne policy, trends, or questions relating to broader marketing issues, such as competition.

Q: I'm a ComputerLand Dealer, and I have received numerous complaints about the *Mailman* software package. It seems to be both poorly designed (user-nasty) and filled with bugs; some customers have asked for refunds. The most serious problem is where files become non-usable by *Mailman*, indicated usually with a message that reads: "BAD INDEXED FILE," "FILE NOT OPEN," or "FATAL SYNTAX ERROR, STACK OVERFLOW." Naturally, entering data for several hours then not being allowed access to it would upset anyone. What's going on?

A: *Mailman* is not preventing an operator from overwriting a needed existing file, or writing to files that it simultaneously draws data from—dangerous practices in either instance. We'll try to explain.

After editing/creating a mailing list file, the next step is to "select out" the list for printing. The screen

prompts the user for a new file name, and here the problem begins. If the operator inadvertently uses the same name as the mailing list file, a host of different and difficult to document problems arise. Apparently, *Mailman* starts writing to a file it is concurrently drawing data from—a no-no. Whatever the reason, *Mailman* should have included a warning message that informed the operator that the file name already existed, and to choose a different name.

We have run into a few other problems with *Mailman*:

1) There is no way to conveniently stop the printer once it starts printing. Pressing the RESET button is all you can do; *Mailman* then needs to be rebooted. 2) The State field converts lower case into upper case characters (a nice touch), but they forgot to do the same with the Middle Initial field. 3) There is no distinction between "create" and "edit." After filling in the Name and Zip Code fields (and in that annoying order), *Mailman* searches for that record as if an edit were being performed. However, it does this procedure even if the list is being entered for the first time and there is nothing to edit. So, every record entered causes a disk access search, slowing the operator down.

These and other complaints are being examined by Standard Microsystems, the creator of *Mailman* and by Osborne's Software Acquisitions department. The solution will probably be in the form of a new version upgrade.

Q. What happened to Microstat?

A: The versions of Microstat we were provided by the author never met our standards for software, therefore we decided not to market the package. We are currently looking for a replacement for this program.

Q. What does Osborne do for user groups? Do you provide them with anything that isn't available elsewhere?

A: Originally, Adam wanted to maintain a complete separation between the company and user groups. It was his feeling that user groups provide the objectivity that keeps a company on its toes and he didn't want Osborne doing anything for the user groups that might compromise that arrangement.

This past October it was decided that Osborne should have a more formal relationship with the user groups, one in which information can be exchanged in both directions, without compromising the user group's objectivity. To that end, a user group coordinator, Esther Massie, was appointed. As this is being written, she has begun the process of contacting each known user group and finding out their needs and desires vis-a-vis Osborne.

All communication to Osborne from user groups should be channeled through Esther. As before, Adam, myself, and others in the company are available on occasion to speak before user groups; such scheduling should now be arranged through Esther.

Q. Sometimes when I use *WordStar* with *MailMerge*, the first page prints out correctly but all pages after that have the dot command printed out on the first line. In a different situation, sometimes I get blank or incomplete pages printed out after the first page was correct. Why?

A: This problem is very common; you have inadvertently inserted spaces after the .PA command and last carriage return in your file. In other words, this is what your file looks like (<cr> represents carriage return, <sp> is a space, and <_> is the cursor location):

```
.PA <cr>
_____ (page break line)
<sp> <sp> <sp> <_>
```

It also could look like this:

```
.PA <cr>
_____
<cr>
<cr>
<cr>
<cr>
<sp> <sp> <sp> <_>
```

This is what your file SHOULD look like:

```
.PA <cr>
_____
<_>
```

Type a ^QC to move to the end of the file. If the cursor is not located immediately below the dot in the .PA command, then type ^ hyphen to erase the trailing spaces and carriage returns up to the proper location.

The reason the dot commands are printed rather than interpreted is that *MailMerge* does not recognize the end of a line until a carriage return is reached. *WordStar* wraps around to the first line of the document (which happens to be your dot command) to look for a carriage return. The dot command is not recognized as starting in the first character position because of the embedded spaces, and is consequently printed as text.

Blank or incomplete pages are printed because of the same embedded carriage returns/spaces problem except that now your file DOES end with a carriage return. The fix is the same in either case.

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Q. Why is it that I get periodic "File Not Loadable" error messages with *SuperCalc*? This problem is quite infuriating. Sometimes I spend many hours building a spreadsheet, with periodic saves to disk, only to discover later that the file is "not loadable." I've tried everything to call the file back up—but always to no avail; however, the file is still listed on the directory.

A: We suspect that when the file was saved, the diskette became full. *SuperCalc*, however, had already erased the original file to make room for the new one. The directory listing is not erased.

As this is a serious problem, let's go through the complete scenario:

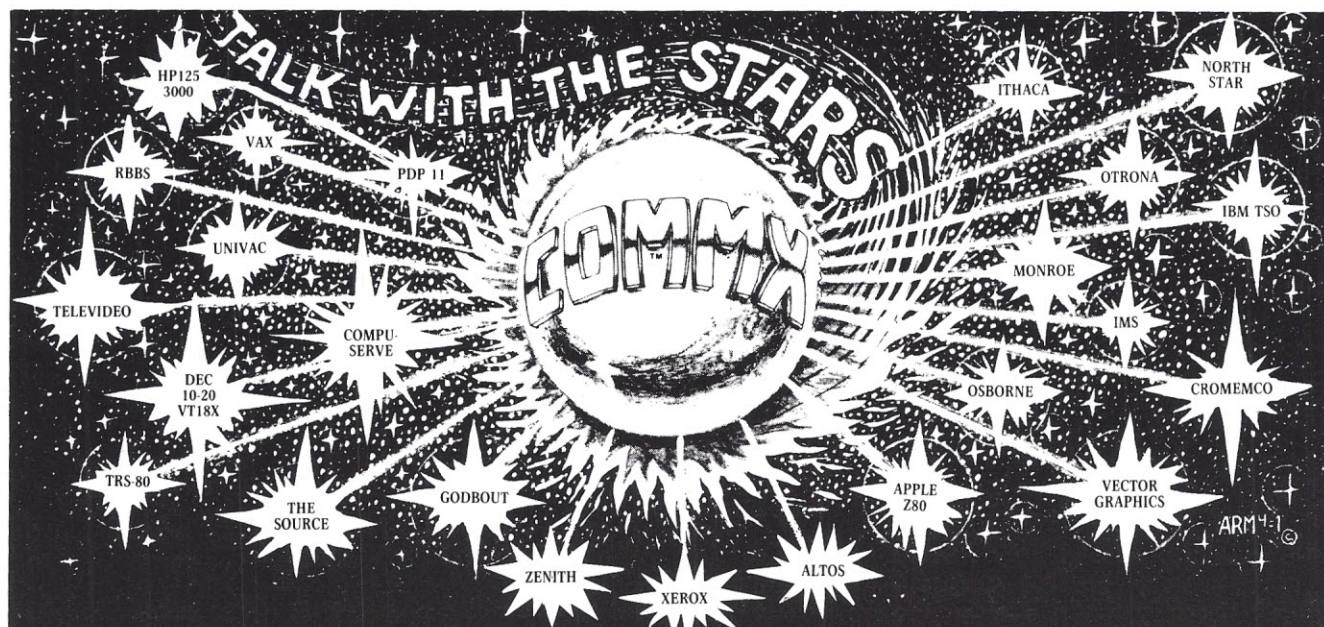
A spreadsheet has been created and saved. You now wish to extend or add information to the spreadsheet, so you call it back up, make your changes, and then type in the save commands. *SuperCalc* will prompt you that the filename already exists and do you want to overwrite? Invariably, the response from the *SuperCalc* user will be "yes."

SuperCalc erases the sector header (removing the old file from the diskette) and proceeds to write the new file over it. If there is enough room on the diskette, the spreadsheet is saved. However, if your new spreadsheet exceeds the diskette capacity, it is not saved and the "disk full" message appears. Unfortunately, the original file has already been erased—a tactical error Sorcim

is working on. Attempting to load the file produces the "File Not Loadable" message.

If this ever happens again, and your spreadsheet is still on the screen, simply place another diskette in the "B" drive and save to it. LET THE DISK FULL MESSAGE BE YOUR WARNING! When that pops up, and you just attempted to overwrite a file, be advised that the file was erased off of the diskette.

There are two ways to prevent this from happening. 1) Keep track of your disk space! Periodically run XDIR on the file diskette. 2) Do not overwrite a file if you think the diskette is getting full. Instead, choose another file name. If the diskette is indeed full, the original file is not erased. 



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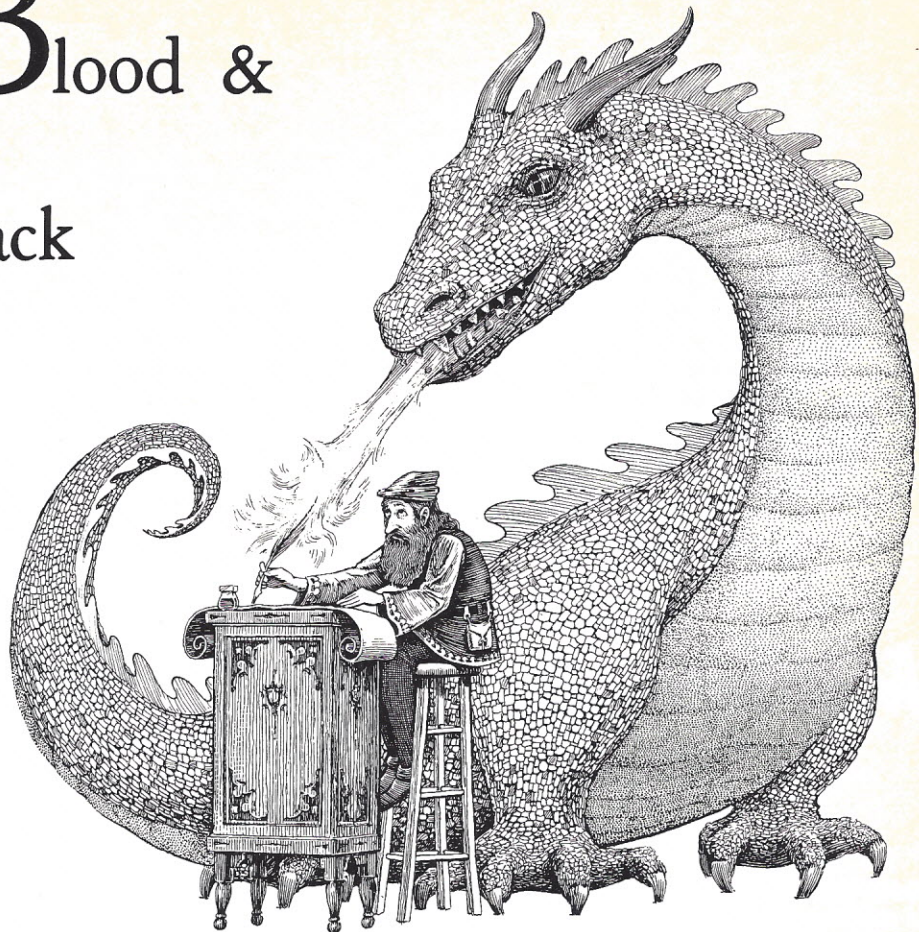
Richard Drakeford

In olden days when ink was brewed from dragon's blood and lampblack and each sheet of paper was hand-made from recycled underwear, the monks and magicians thought twice before setting down their thoughts. With the ink on paper technology, the physical reorganization of expressed thoughts was relatively difficult, so things tended to stay the way they were first put down. To avoid grappling with intractable ink and paper, the emphasis was on the careful organization of thought as a condition precedent to writing down. Revision was thus avoided by taking great care in inscribing thoughts.

Fluent writing in those days was the mark of a genius who was able to organize a sizable body of thought within his mind, prior to putting pen to paper. To more ordinary people who had something to write, the great care required in organizing thought was often constipating in effect.

The typewriter and inexpensive wood-pulp paper made the practice of drafting common—the first rough draft was seldom what turned out to be the final presentation of words to audience. But, revision, though easier, was still difficult and to be avoided as much as possible. Furthermore, collections of notes and drafts and revisions tended to make the author's garret a messy place.

To those who learn computer-assisted text processing, the physical reorganization of words is vastly eased, so much so that the writing process can be a chicken and egg conundrum. One must still think up before writing down; but you need not exhaustively think out. The interaction between brain and inscribed words is often complementary. That is, the physical manipulation of ideas already expressed in tangible physical form can be an aid to the better organization of the mental concepts. This is a new stage in the art of thinking/writing (which is now also



writing/ thinking).

The Osborne 1 permits trial physical orderings of thought up material to be done as experiment, and quickly discarded if fruitless. A too-fecund proliferation of burgeoning notes can be quickly weeded out; redundant confusion evaporates in the wink of an eye. Interjections and tardy afterthoughts need not be left behind—insertions go anywhere and easily. A paragraph with a case of fungus or gangrene can be doctored by either the application of salving verbiage or by drastic surgery, as appropriate.

Although the emphasis here is on textual matter and thinking in words, this is not to deny or denigrate other non-linear methods of thinking and notating. As just one example, structure visualization and subsequent notation in diagram or sketch, chart or map have great utility. It's just that the personal computer is not yet fully equipped to deal with such thought and notation.

But the computer does deal admirably with one particular form of ideas: thoughts expressed in the English language and notated as a se-

quence of words made up of alphabetical characters.

To those who learn to use this new tool, the process of writing takes on a new plasticity. Computer memory and magnetic media marked with bytes are infinitely more malleable than rag paper marked with the red ink called dragon's blood. The computer, by making it vastly easier to physically inscribe words and subsequently change them, has transformed writing/thinking.

Where once the comprehensive mental organization of words was an absolute prerequisite to writing, the physical acts of writing and rewriting words can now be an aid to the process of thinking—easy physical manipulation of textual material organizes thought as well as the other way around.

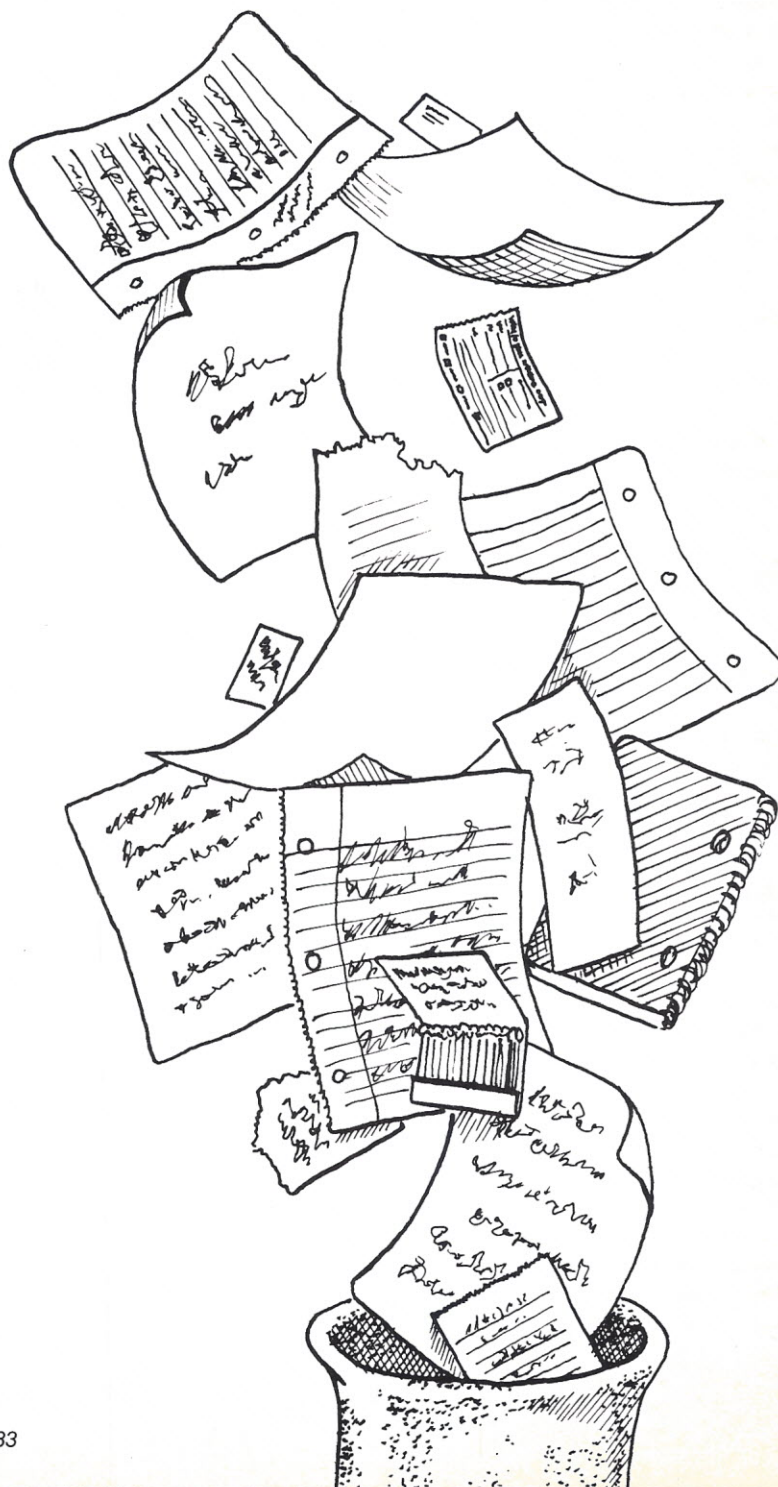
(Richard Drakeford is a retired army officer who lives in the San Francisco East Bay area. He has published fiction under other names in men's magazines. After retiring in 1971, he attended the University of California at Berkeley, obtaining a degree in Rhetoric in 1975 and a law degree in 1978.)

Sorting notes with MailMerge

Richard Drakeford

"...I took some of the papers, and making short hints of the sentiment in each sentence, laid them by a few days, and then, tried to complete the papers again by expressing each hinted sentiment at length... I also sometimes jumbled my collections of hints into confusion, and after some weeks endeavored to reduce them into the best order, before I began to form the full sentences and complete the paper. This was to teach me method in the arrangement of thoughts."

—Benjamin Franklin
in *The Autobiography*



Benjamin Franklin deliberately jumbled his notes in order to teach himself the art of writing. He recognized that the topical content of a composition is often a separate issue from the problem of sequence or form—"the *arrangement* of thoughts."

Today you can use your Osborne 1 to sort a pageful of jumbled notes into a logical sequence, and it doesn't take a program to do it. Just use the Merge-print command of MailMerge to print a sorted sequence to a new disk file.

Most people find it convenient to take notes higgledy-piggledy, catch-as-catch-can. Prior to a first draft, there must be a collection of raw material about which to write. You can, of course, collect material in your head and have your subconscious sort it out before you write it down in some order—the old fashioned method, but still effective. Or you can let your Osborne 1 assist you in the collection/ordering process, which may be even more effective.

Notes for fiction often come out of your own unbridled imagination. Legal research notes are copied out of case reports and lawbooks. School notes come out of textbooks and other reference books. The point is that it is often more efficient to take notes in a jumble in the order you think them up or the order you come across them. They can be sorted out later.

Your notes on one topic are not made all at the same time. If you are like me you will be learning about a subject little by little. Or you will be thinking up something to write piece by piece, at odd times, over a period of days or weeks. Just open a WordStar Non-document file on a subject and add notes to it when the occasion arises. Use accretion, the way an oyster makes a pearl, to accumulate material.

Someone with varied interests will

be working on more than one topic at a time. Just keep separate files for each different subject or major subdivision of a subject on which you are taking notes. One diskette can handle many short files. A student might keep a separate diskette for each class in which he is enrolled, with separate files for lecture notes, gleanings from textbooks, a bibliography, notes from outside reading, and material being collected for a term paper.

Let's take some notes!

In order to facilitate sorting later, you formulate each note as a chunk of data for the computer. In computer lingo, each short note will be the value of a string variable. Use the N command of WordStar to create a data file readable by MailMerge.

Data files readable by MailMerge are a series of ASCII alphanumeric characters delimited into separate items by commas and carriage returns. MailMerge will recognize a variable holding up to 200 characters. That's a pretty long jotted note, equivalent to 35 or 40 words. Even though MailMerge will handle such notes, for human convenience, write notes that are not longer than one line on your printer. My Epson printer will print up to 132 characters on a line in compressed mode, so I limit my notes to 132 columns.

To hold to the strict format required by the computer, each note must end with a carriage return. You will create a data file that the computer sees as a series of records (lines), each consisting of one data variable, a rather long string of ASCII alphabetical characters. In a Merge-print data file, the carriage returns are used as record delimiters.

All those short, punchy lines can be combined and lengthened and fleshed out later. It is later, after sorting, that you handle your material as text—not data.

You must avoid using commas in your notes. MailMerge data files use

Most people . . .
take notes higgledy-
piggledy, catch
as-catch-can.

A*fter thinking up or copying down one line notes, you will want to sort them into logical order.*

```
PIP LST: = GOOSEY.NTS
Wasn't that a dainty dish
And in mylady's chamber;
Whither shall I wander?
I took him by the left leg
Upstairs and downstairs,
Goosey goosey gander,
Who wouldn't say his prayers;
All the king's horses and all the
king's men
And threw him down the stairs.
There I met an old man
Jack fell down and broke his crown
Figure 1
```

```
xWasn't that a dainty dish
dAnd in my lady's chamber;
bWhither shall I wander?
gl took him by the left leg
cUpstairs and downstairs,
aGoosey goosey gander,
fWho wouldn't say his prayers;
yAll the king's horses and all the
king's men
hAnd threw him down the stairs.
eThere I met an old man
zJack fell down and broke his crown
Figure 2
```

commas as well as carriage returns as data delimiters. If there is a comma in your note, the scanner will read it as two variables rather than one. You can put quotes around the string to get around this.

Also, you cannot use the word-wrap function when entering notes that will be manipulated as data. Word-wrap abides by margin settings and puts in unwanted carriage returns, which would be erroneously read as data delimiters.

At some point after thinking up or copying down one line notes you will want to sort them out into a logical order. Maybe it is time to write the article. Maybe you need to prepare a master outline to study for a final exam. Whatever.

Prior to sorting you must mechanically edit your notes to make sure they are formatted to be handled as data. Mainly, make sure they contain no commas. Find all inadvertent commas and delete them by replacing with nulls. Use the rapid ~QA global replace operation of WordStar's edit facilities.

Next, exit your file and print it to paper. That means you print it in its present state of jumbled disorder, I find it convenient to use the CP/M PIP command to list the file on fan-fold paper. Successful printing by PIP command verifies that the file is in strict ASCII format as required for data files. Using PIP also avoids default page formatting. See Figure 1 for an example of notes in the kind of jumbled confusion Benjamin Franklin would have liked.

Now look at your raw notes and start to order them mentally. Assign names to your notes in pencil along the margin. The variable names you assign now are the sequence in which the notes will be read. But there's the trick: the notes will be Merge-printed out in a different sequence, a sequence that you specify by reference to the variable names.

Variable names should start with a

letter; otherwise you have great freedom. MailMerge will spit out the notes in any sequence you specify, but it is wise to pick names that are indicative of the desired order. Think of notes as "point a...point b...point c" as you decide on their arrangement.

See Figure 2 for an example of jumbled notes to which names have been added.

It is simplest if you use only the letters of the alphabet as sequence indicators. If you have more notes than letters of the alphabet, then go through again with two letter indicators: aa, ab, ac and so forth.

After you have penciled in all your variable names, write a MailMerge command file. A command file reads all the variables from a data file in the order it scans them. That is, the scanner is instructed to read a certain variable named in the dot command ".RV" and the next blob of data it comes to in the data file (your notes) is assigned to that variable name. Therefore it is extremely important that names and notes are synchronized here.

(There must be a limit to the amount of material and the number of variables which WordStar can read simultaneously by one command file. But with short note files, I have not yet run into that outside limit, whatever it is.)

Put a .DF command in your Merge-print command file, which refers to your note file for data. As far as Merge-print knows, your note file is a data file consisting of variable values.

Put a lengthy .RV command in your Merge-print file. Each variable will be read in the order now given—that is, in the same non-logical order of the original writing of the notes. The sequence of the .RV command is exactly the same as the sequence you penciled in along the margin of your notes. Every single note in your note file must be in-

cluded in the reading operation. Your .RV command might look as follows:

"RV x, d, b, g, c, a, f, . . . etc."

The sorting of the file takes place now, in the computer. For the "text" of your MailMerge file is nothing but a print-out of your notes in the order you desire. Put one reference to be printed on each line—in order. Since we used the alphabet to name the notes this is a simple matter and this part of the command file will always be the same. (You can write it once and copy it into any command file you subsequently use.)

When your Merge-print command file is complete, you are ready to read and print the notes. See Figure 3 for an example of a MailMerge command file.

You need not print your notes to paper. Print them to a new diskette! You can always print them to paper later or reformat to 52 columns wide and look at them on the screen.

One useful trick to learn about MailMerge is to use it to print to disk by answering "YES" to the Disk File Output" option. This makes up new merged or reordered files.

Some tips on Merge-printing to diskette: format the new file with the dot commands .mt O and .po O. Otherwise "printing" will take place at the default values; spaces for a top margin and left margin will be put in to the new file. Also, end the MailMerge command file with just one carriage return, or WordStar might print out an extra blank page.

Now, if your variables have been carefully synchronized between the reading and the writing of them, your new file should have the same notes you wrote into the note file higgledy piggledy, but now arranged in the logical order you desire. See Figure 4, which is a printout of a disk file containing the original notes in sorted order.

The synchronization is very important. One note read out of order screws up all the following notes. For

this reason this procedure works best with short files, say about one (packed) typewritten page in length, about 50 notes maximum.

Once your jotted notes are in some sort of order, you can start treating the material as text to be edited and re-written rather than as mere data to be sorted. Your new micro-sorted file is the basis for your own manual revision, the cutting, embroidering, and rewriting—perhaps in combination with other files—that results in a first draft of text or logical study outline.

Recapitulation:

1. Type notes one to a line in any order, using the N command. Each note is a piece of data. Keep short. No commas.
2. Print notes using PIP to LST.
3. Assign variable names indicative of order to each note. The alphabet makes good names.
4. Write a Merge-print file which uses the note file as a data file and reads the one-line variables in the order they are written.
5. For text of the Merge-print file, use the variable references in the new order you desire.
6. Merge-print the file to diskette. Merge-print will read the notes from the data file and print them out to the diskette in the new arrangement.

Following this procedure allows you to generate or collect notes at top speed without regard for the ordering of them. By temporarily divorcing content from form and working strictly on content, you are able to work faster. You may add to a file of notes at any time. Once you have a running start with some rough sorted notes to work on, it is easier to do the subsequent manual word processing: the cutting, revision, amplification and polishing of the raw material into a first draft.

This procedure allows you to generate or collect notes at top speed

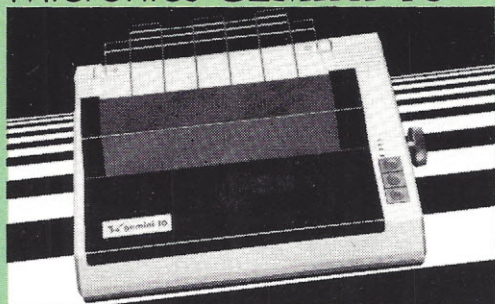
```
..COMMAND: a command file to
read notes and reorder
.MT O
.MB O
.PO O
.OP
..next is name of note file
.DF GOOSEY
..next command reads notes in
..existing order
.RV x,d,b,g,c,a,f,y,h,e,z
.."text" of this command file prints
..notes in new order desired. Note
..that x,y,z, although read in are not
..printed; found to be extraneous.
&a&
&b&
&c&
&d&
&e&
&f&
&g&
&h&
..end of new file
```

Figure 3

```
Goosey goosey gander
Whither shall I wander?
Upstairs and downstairs
And in my lady's chamber;
There I met an old man
    who wouldn't say his prayers;
I took him by the left leg
And threw him down the stairs.
```

Figure 4

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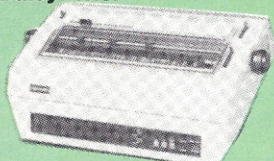
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The academic and WordStar

Preparing term papers, dissertations and theses

Edward F. Leddy

This article was born out of nine months and many hundred hours at the keyboard, preparing a PhD. dissertation. It focuses on time-saving techniques designed to help the academic user get the most out of his/her computer and Epson printer when composing term papers, theses and reports.

Most colleges and universities require that you comply with either "Turabian" (Chicago Manual of Style) or A.P.A. (American Philological Association) formats and many teachers are rigid about following them exactly. Since these formats were designed for typewriters, the computer user cannot take advantage of many of his/her printer's features. Double size or condensed print faces are definitely out. However, if you employ emphasized or boldface print for the entire paper, the instructor may not realize it was created with a dot matrix printer.

To make a success of the following information, you should install your Epson printer in the manner outlined in "WordStar With Epson," by Jim Wooley, in the June/July issue of the *Portable Companion* (pages 22-23). Be sure to use the patches that make superscript and suscript work.

To make your papers easy to com-

pose, set the Special Function Keys (SFKs) as shown below. These settings will allow you to do most of the formatting automatically.

0. Initialization; log Drive B; right margin 52: double spaced; HELP level 2:
B:[cr]H2DT[cr] ^OR52[cr]
^OS2[cr] ^K ^QY
1. Centers headings and prints underlined boldface:
^PB ^PS ^OC
2. Underline and boldface—not centered:
^PB ^PS
3. Sets margins and spacing for long quotes:
^OG ^OG ^OS1

Use the other SFKs for common expressions in your field.

If you have a word or expression that you use often, but you don't want to put it on a SFK, use a code or initials for it when you type the text. When you've finished, use FIND and REPLACE (^QA) to put in the full expression (see *Common WordStar Commands* on the following page).

If you use A.P.A. format, footnotes are easy to handle. You simply put the author's name, year published and page reference at the end of the

quote. Later you can compile these to create the bibliography at the end of the paper.

In Turabian, a miserable, pedantic, and unfortunately, widely-required system, footnotes are more of a problem. They have to occur at the bottom of the page and must be numbered. If you're lucky enough to have the *Footnote* software program for the Osborne 1, you're in great shape. Otherwise, the following method works in a pinch.

Type the footnote just under the quote and leave it there during the editing process. When you're ready to complete a final draft, you know what page each footnote will occur on. Number both the quote and footnote with a subscript ^PV. Then use the block move feature (^KB) to mark the beginning and ^KK to mark the end of the footnote. Execute ^KV to move each footnote to the bottom of the page.

To construct a bibliography, use the COPY block ^KC command to move your footnotes to the end of the paper, while leaving them intact in the text. You'll have to change the content of the footnotes slightly to use them in a bibliography, but this is much easier than doing a complete rewrite. Voila!

Common WordStar Commands

Edward F. Leddy

SET MARGINS

- ^OR Set right margin
- ^OL Set left margin
- ^OC Centers text
- ^OS Change line spacing
- ^OF To resume previous margin, place cursor in line previously typed
- .MT Top margin (defaults to 3 lines)
- .MB Bottom margin (defaults to 8 lines)
- .PO Page offset (Defaults to 8 spaces. For those of you wondering why your printer moves over 8 spaces from the left side, this is the reason why. Use .PO 0 to eliminate any offset.)
- .PL Paper length (default length 66)

MOVING

- ^QC Move quickly to END of file
- ^QR Move quickly to START of file
- ^QB Move quickly to BLOCK beginning
- ^QK Move quickly to BLOCK end
- ^KS Move to START of file and save
- ^KQ Go to "No File Menu"
- ^S Move cursor left one character
- ^D Move cursor right one character
- ^A Move cursor left one word
- ^F Move cursor right one word
(see manual for other cursor movement commands)

SAVING

- ^KS Move to start of file and save (and continue editing)
- ^KD Save and go to "No File Menu"
- ^KX Save and take a coffee break
- ^KQ Abandon ship (exit without saving)

REFORMING TEXT & PAGES

- ^B Reform text (cursor at beginning of paragraph)
- .CP Start a new page IF the text is longer than set line number
- .PA Start a new page

DELETE

- ^G Single Character to the right
- ^- (control hyphen) delete character to the left
- ^T Word to right of cursor

- ^Y Entire line
- ^KJ Entire file (use with caution)
- ^KY Delete block

SCROLL

- ^Z Scroll down one line
- ^R Scroll down screen
- ^W Scroll up one line
- ^C Scroll up screen

MOVING TEXT

- ^KB To mark beginning of text to be moved
- ^KK To mark end of block
- ^KV To move block of text to new location of cursor
- ^KC To copy block of text in new location and leave it in original location
- ^KH To remove highlighting of block of text
- ^KW Write block to another file
- ^KR Read block in at cursor location from another file (a powerful command)

FIND AND REPLACE

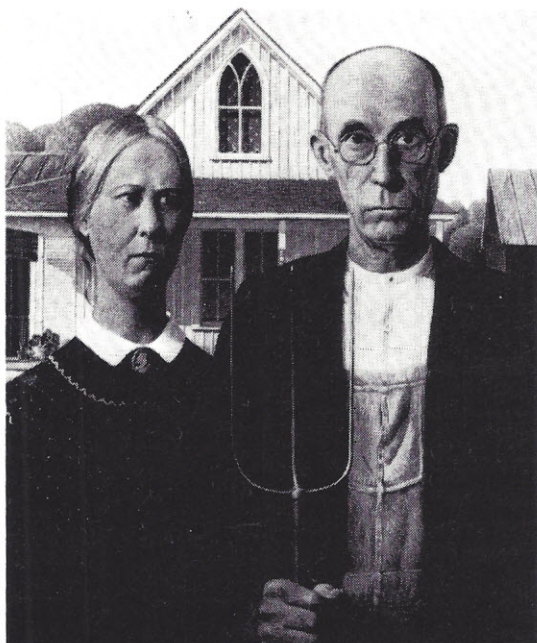
- ^QF Find only (searches forward from cursor location unless option B is specified)
- ^QA Find AND replace options:
 - G change all occurrences of a word
 - N don't stop to query
 - U find both upper and lower case instances
 - W ignore if in a longer word
 - B searches backward from cursor location

PRINT COMMANDS

- ^PB Boldface: execute before and after text to be boldfaced
- ^PD Doublestrike: execute before and after text
- ^PS Underline: execute before and after text
- .HE Heading
- .FO Footing
- .OP Cancels page numbers

(Obviously not all of the commands have been listed in this "cheat sheet." We've concentrated on the more commonly used ones. You may want to add more of your own.)

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American Gothic — Grant Wood

BusinessMaster Plus is one of the most comprehensive and professional business and accounting packages available. The General Ledger, for example, was designed around the IMS format to fit the requirements of a major New York based accounting firm. The Fixed Asset accounting package was designed to fit the needs of a San Francisco based Financial Investment house. Together, the General Ledger, Payroll, and Fixed Asset accounting package provide one of the finest Client Writeup packages available at ANY price.

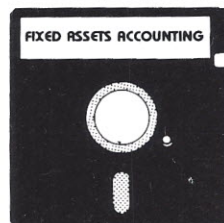
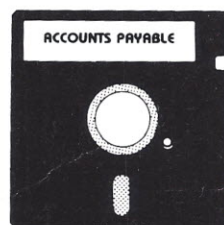
The package includes General Ledger, Payroll, Fixed Asset Accounting, Accounts Receivable, Accounts Payable, Inventory and a Mailing List package. These are all implemented under FULL menu control, integrated, and provide for data entry from fully formatted, fill-in-the-blanks data entry screens.

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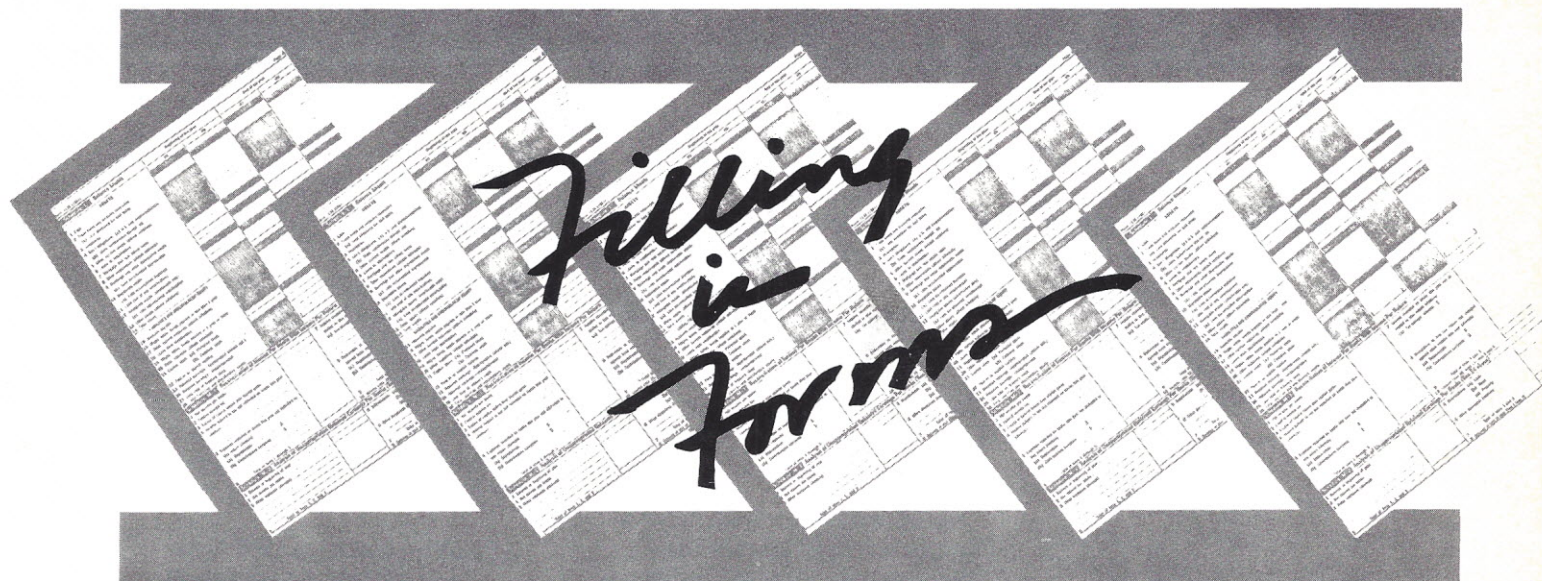
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WordStar tackles preprinted forms

Scott Rainey

We all have to fill in forms. Tax forms, contract forms, midterm exam essay questions, government forms of all kinds; and of course those report forms that upper management always springs on you at the worst possible moment.

My typing isn't very good, but my handwriting is worse, so filling out a pre-printed form neatly has always been a near impossibility for me. On the rare occasion when I did fill one out neatly, there were always the globs of white-out on the form.

WordStar has a feature that allows me to fill in the blanks on any pre-printed form with perfectly typed information. That feature is the WordStar pause-print command ^PC (which is seen on the screen as ^C). When printing, each time WordStar encounters a ^C in your file it stops your printer and prompts you to press the "P" key to resume printing.

When you press "P", your printer resumes printing the text (^C will not be printed of course) until it encounters another ^C where it will pause again. During a fill-in-the-form exercise, this allows you to reposition the print head at the next blank, and resume printing.

If your printer doesn't allow you to position the print head, you will have to set page offsets on your fill-in file. First count the spaces from the left side of the form to the blank to be filled in. Use this number and a dot command for page offset. (.POXX) above each fill-in blank in your fill-in file.

Be very careful about properly aligning your page and counting spaces. Don't forget that your standard installation of WordStar will add eight spaces of offset on its own.

If you have a form that you use frequently, make yourself a fill-in file, with all the blanks you usually encounter neatly laid out. You may want to identify all of your fill-in files with names like:

FILENAME.FIL.

Making a Fill-in File

To make a FILENAME.FIL file, simply identify each blank in your form with the double period dot command, and put an "@" on the line below it. WordStar interprets two periods in the first two columns as comments that are ignored in normal

printing. The "@" is a find-and-replace character, which is replaced with a ^C later.

```
. . (comments identify the blank
    to be filled in)
@ (your input for filling in the
   blank here)
. . Next Blank Space Identifier
@ Etc. etc. etc.
. .
@
```

Filling In Your Form

Once you have FILENAME.FIL set up, whenever you have to complete another copy of that form, you simply call up the file and fill in the blanks.

Now instead of saving the file with ^KD or ^KS, make the entire file into a block (^KB at the top, ^KK at the bottom) and write (^KW) the entire file to a "scratch file."

Next, use the "Find and Replace" command (^QA) to replace all of the @'s with ^C (^PC). Use the find and replace options G and N (G = Replace every occurrence in the file; and N = Replace without asking) to make this a painless and fun-to-watch process.


```
.PL200#####
.POØ      Filename.FLL
.MTØ.....:
.OP      Routine for Filling Out
..          Blank Form:
..-----Formname.etc.-----
.....:
          DIRECTIONS
.. Each phrase after two
.. periods will identify a blank
.. to be filled in on FORM-
.. NAME.
.. After each @, fill in the
.. words, numbers or
.. phrases that you other-
.. wise would put onto
.. the blank form.
.. Make the entire file a
.. block with ^KB, and ^KK.
.. Write the block to a
.. Scratch File [ ^KW]
.. Use Find-and-Replace
.. [ ^QA with G & N Options]
.. to change
.. the @ to ^C. [Use ^PC
.. to display ^C]
.. Save to second Scratch
.. file with ^KW.
.. Print the ^C scratch file
.. on the blank form, posi-
.. tioning the print head over
.. proper blank spaces, using
.. printout from 1st Scratch
.. File with the @'s for
.. Reference.
..#####
```

Figure 1

The file should now look like:

```
. . (Comments identifying
    blank to be filled in)
^C (your input for filling in the
    blank here)
. . Next blank space identifier
^C Etc. etc. etc.
. .
^C
```

Again, write the whole file in a block to a second scratch file.

Keep your original fill-in file unchanged by using ^KQ to exit, without changing anything in your format file. If you do screw up and press ^KD by mistake, you can always salvage the original which has now become a back up.

Now print the first scratch file (the one with the @'s) to proof your work, and give you a map to guide you in filling out the form. When you execute the print commands, don't press ESC to save yourself all of those carriage returns. Instead, go through the print menu and answer Yes to "Supress Page Formatting?" WordStar then prints out the double period comments.

You are now ready to fill in the form by printing the second scratch file, the one with the ^C's. Load the form into your printer, tell WordStar to print the second scratch file, and press ESC to avoid all of those RETURNS. The printer should line feed once or twice and then you will see the prompt on the screen tell you to press "P" to continue printing. Position the print head over the blank you want to fill in and press P. Your Ozzie will whirr & grind as your printer fills in the first blank, does a carriage return, and pauses again. Repeat this process for each blank, using your printout from the first scratch file to guide you.

Practicing a few times with a copy of the form is a good idea to help you get the hang of how it works.

Headers

Your fill-in file should have the following dot commands at the top to keep you from having to backspace eight places before each blank you want to fill in, and also to keep your printer from breaking for pages and entering page numbers at inappropriate times.

```
.PL200 (print up to 200 lines
        without a page break)
.POØ (Page Offset Zero)
.MTØ (Top Margin Zero)
.OP (Omit Page Numbers)
```

As a reminder to yourself or a co-worker of how the fill-in file works, put the following header block (Figure 1) at the top of every fill-in file. It is 21 lines long, and with WordStar help level set to 0, 1, or 2, it will fit the first screen when the fill-in file is called up.

I recommend that if you use this header, or one of your own devise, you make a file called something like HEADER.FIL. Once you have the file set up, you won't have to retype the header each time. Simply read HEADER.FIL into the top of any subsequent fill-in file using the "Insert a File" command (^KR).

Two last notes.

If you use @ in your text files, then naturally you will want to use some other character for the find and replace character. Likely candidates are I#%&*][\ or !.

You probably noticed that the four dot commands I suggested are at the top left corner of the header block. Since any words inserted after a dot command do not print, this is a good place to put your comments, since it saves a few lines. However, if you think you need to make you dot commands more visible, you can always put them at the bottom of the block.

"I Love To Drive My 380Z"

"...And I can drive it at 32 CPS with an Apple, Osborne, TRS 80 and others."

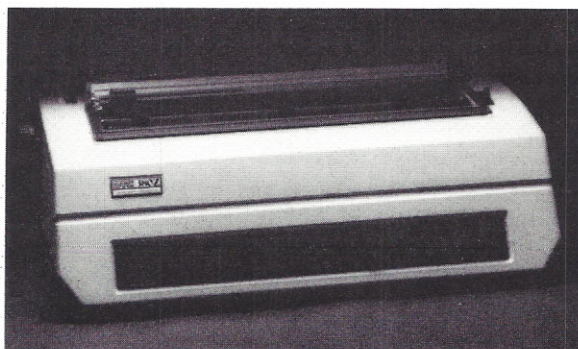
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S B O R N E
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R E C O R D

Three firsts were set for the Osborne computer during the last week of September, 1982. First, the machine was lofted to a world's land record height of 9,100 feet in the Colorado mountains. Second, an Osborne was sold at 9,100 feet. Third, the Osborne 1 modern computer was the technological backbone of the world's first seminar devoted to improving both physical fitness and business productivity.

The idea was to focus on what have become two essential components of productivity in today's market; "physical well-being and productivity" and "how to get more productivity out of your work day." The seminar was developed by Achievements in Microsystems, the Colorado Outward Bound School and OSBUG (the Osborne Santa Barbara User's Group.) It took place at Outward Bound's beautiful Marble Base Camp, outposted in the thick of changing Aspen trees, sunny streams and snowy peaks.

Even though I had seen the ads, I wasn't exactly sure how my first airplane trip with a computer would go. I packed up my Osborne and packed my Epson MX-80 F/T in an aluminum equipment case cushioned with foam. Grabbing my diskettes and sweater, I was off.

The equipment travelled superbly. The stewardess helped me stow my printer and the Osborne fit perfectly under my seat. I had planned on plugging into the electrical shaving outlet in the restroom, but never made it, fearful of being mistaken for a technological saboteur.

In Colorado, I was met by Outward Bound's (OB) Base Camp Director in Marble, Jerry Ahlberg. Jerry was very amused at first to see me carrying what he mistook for a sewing machine. We had a good laugh about that and immediately started searching for a place to plug

in. After a 5½ hour car trip through the mountain scenery we finally arrived at the camp and located a plug.

The Outward Bound schools are built on a tradition of challenge and leadership. One of their summer base camps consists of a collection of cabins high above the remote town of Marble, Colorado. Marble, nearly a ghost town now, was once the quarry site of the marble for, among others, the Lincoln Memorial.

Upon arriving at camp, we set up the Osborne and almost immediately Marlene Hammond, Course Director and Marketing Manager for OB, was playing the computer game *Adventure*. *Adventure* is a game where the computer acts like a gigantic cave. You wander through this cave by giving the computer instructions encountering adventures, dangers and riches along the way. This was a great way to introduce these first time computer adventurers to the wonders of modern computing.

During the week, many sessions focused on "How Computers Help You Produce." As you might imagine, regular discussions were held on Financial Projection, Telecommunications, Generating Reports and Word Processing. A *SuperCalc* model was begun that records calories eaten versus calories burned during exercise. The results gave some surprising long-term projections on how much fat you can expect to lose or gain over the period of a few months. There was plenty of good food, beer and brandy, so the opportunities for consuming a few extra calories were abundant.

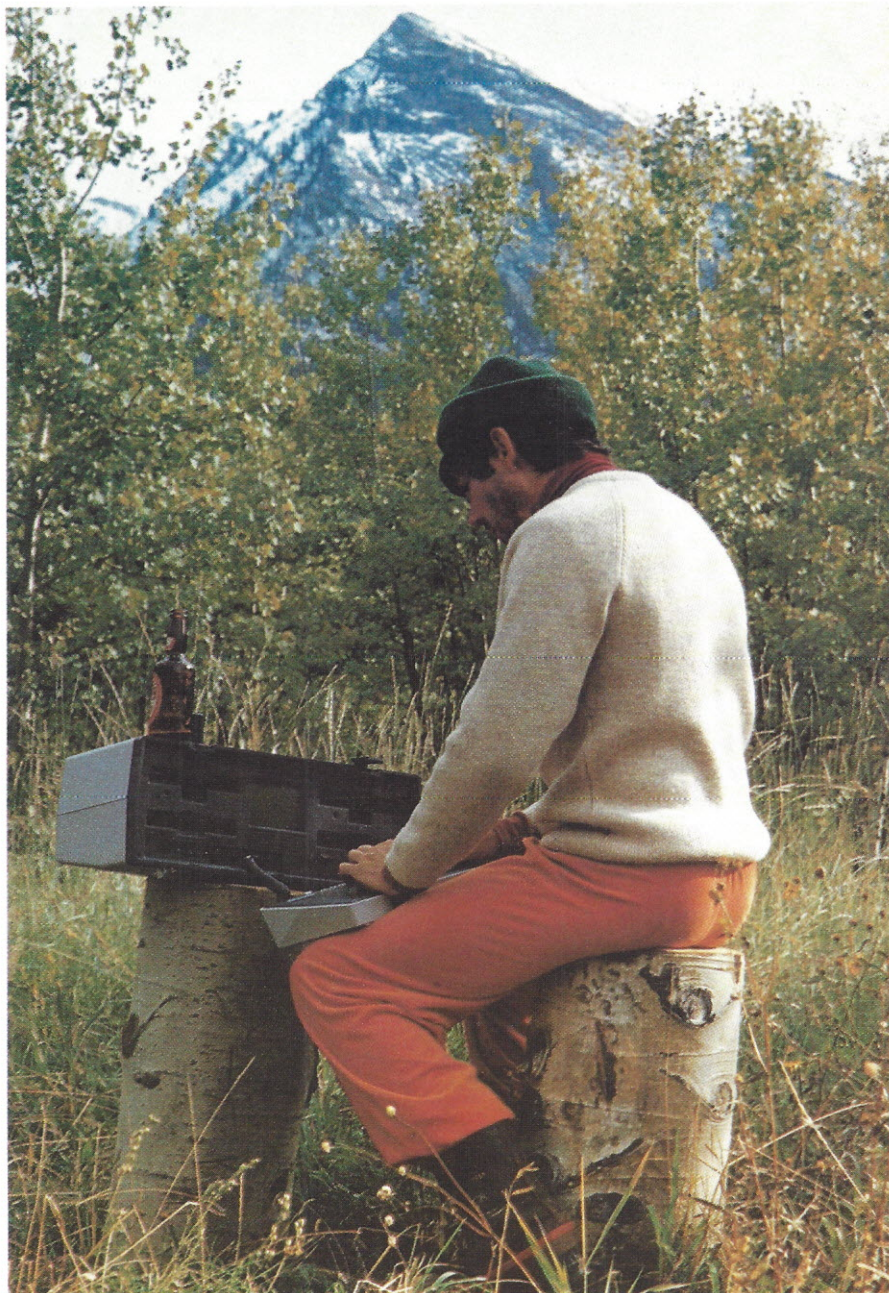
In conjunction with the introduction to the computer came fitness. Some of the most skilled outdoor educators in the country were there to address jogging, stress reduction and weight-loss questions. Everyone agreed that in today's market two

essential components of productivity are physical well-being and a knowledge of how to get more work out of the day. The fact that the Osborne was there to demonstrate its capabilities for both challenges impressed everyone. No one could imagine lugging one of those multi-component Brand X deskbound turkeys that the competition offers to 9,100 feet.

Computer Fitness Seminars. This informal experiment was attended by ten people who didn't know quite what to expect. At the end of the seven days everyone had covered a number of scenic miles on foot and experienced perhaps for the first time, how a modern computer can really turn out the work. Minds were opened. Hearts and lungs were filled with oxygen. The idea was such a success that a larger version of the Computer Fitness Seminar is being planned for late winter in Santa Barbara. This is Southern California's most beautiful time of the year. There's plenty of sun and water. We won't set a new world's altitude record in Santa Barbara, but our schedule promises some exceptional education, fun, and fitness.

For details, contact Rory Donaldson, c/o Achievements In Microsystems, 10 E. Figueroa #2, Santa Barbara, CA 93101.

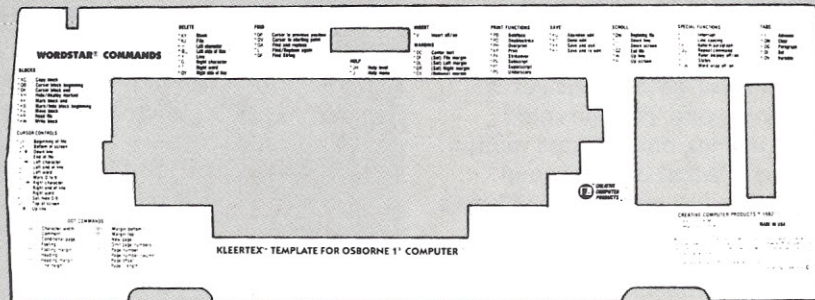
Rory Donaldson is a computer salesman and educator with Achievements In Microsystems Santa Barbara, CA. Previously he was Editor and Program Advisor for the National Jogging Association in Washington, D.C. and is the author of numerous articles and books.



Rory Donaldson running a Break Even Calorie Analysis at 9,100 ft. That's Whitehouse Peak in the background. There were no battery packs so we had to stay within extension cord distance of the cabins. Next year battery packs.

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Test your reaction time

A program to create a homemade stopwatch

Brad Baldwin

This deliberately simple program was written to demonstrate the rather obscure INKEY\$ function and to have some fun along the way. The program also illustrates a random number delay loop; a numerical counter that serves as a stopwatch; and a variation on the INPUT\$ statement. Beginning programmers will also find examples on how to clear the screen, ring the bell, and combine multiple statements on one line.

The INKEY\$ statement allows you to input from the keyboard any character without printing it on the screen. For you to quickly see how this works, type in the following statements using your MBASIC software:

```
10 A$=INKEY$
20 IF A$="H" THEN 30 ELSE 10
30 PRINT "You must have hit the H key!"
```

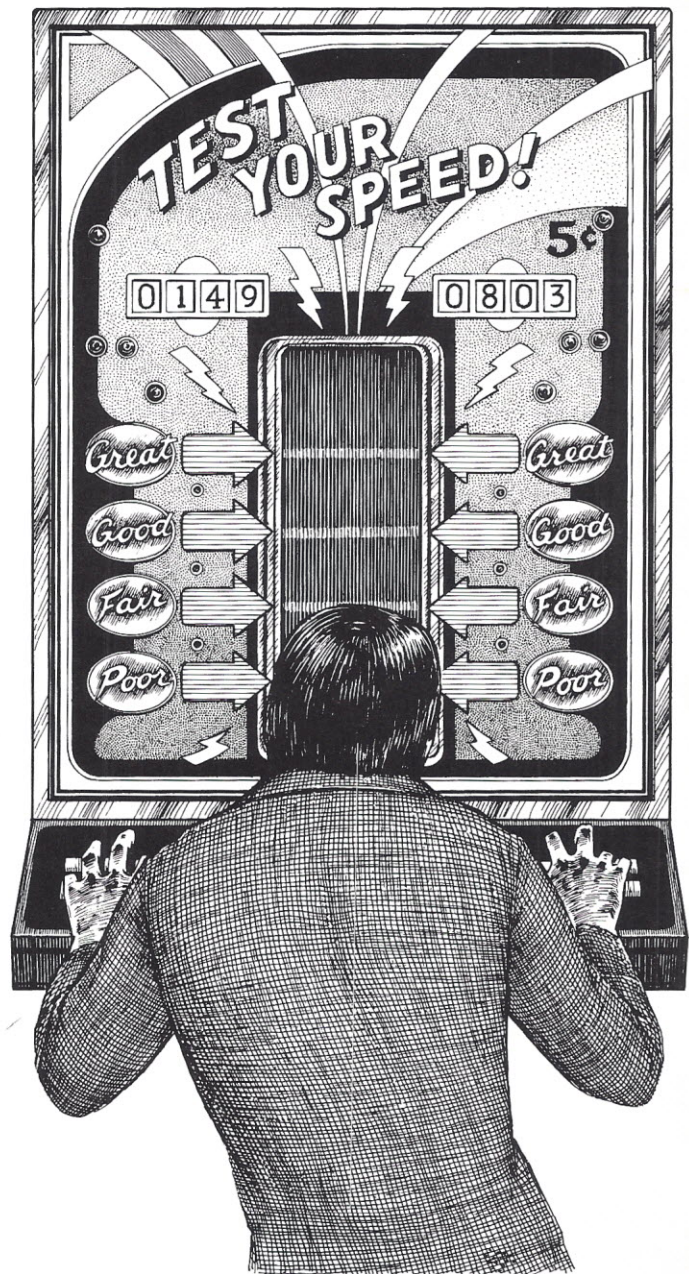
Line #20 is only looking for an uppercase H keyboard input. All other keyboard entries—including no entry—will cause the program to loop back to line #10.

By the way, reaction times are how fast one reacts to some form of stimulus, i.e., when the boss cracks the whip, how fast do you jump! (This program uses a bell and a screen message instead of a whip, so not to worry.) Your reaction time is calculated by how long it takes to react to the bell by hitting the spacebar key and stopping the program's counter. Rube Goldberg, eat your heart out.

Okay, on to the program. Each section will be explained to benefit those individuals just learning about the wonders of MBASIC.

Let's Do It!

We begin by doing some housekeeping. The CLEAR statement is not used very often, but it is necessary in this program as we'll soon see. Incidentally, the apostrophes before the descriptive statements on the right are ignored by the computer. We use them as simple messages for the poor, hapless programmers that need to interpret a program written by other individuals.




```

10 CLEAR           'sets variables to zero
20 PRINT CHR$(26)  'clears screen, homes cursor
30 COUNTER=0       'sets counter to zero after every pass

```

Statement 40 calculates a random number integer between 1,000 and 8,000. This is used in conjunction with statement 60 to give us a random delay loop. The delay makes it difficult to anticipate when the reaction time signal begins.

```

40 A = INT(RND(1)*7000+1000)
50 PRINT "Hit the spacebar when signaled....."
60 FOR DELAY=1 TO A:NEXT DELAY

```

This particular INKEY\$ function prevents you nasty cheaters from having the spacebar key (or any key, for that matter) pressed down before the start of the reaction timing. Notice that the quotes are together; it means if the computer sees no keyboard characters, then proceed to line 120, otherwise print "CHEATER!"

```

70 C$=INKEY$
80 IF C$="" THEN 120 ELSE 90 'no space in between quotes
90 PRINT "CHEATER! You pressed the key before the signal or"
100 PRINT "           perhaps the key bounced twice previously."
110 GOTO 40

```

Rings bell, starts counter, awaits a spacebar input. COUNTER/135 gives a fairly close approximation of actual seconds gone by before the spacebar was hit. The PAUSE loop slows the program down to give you a little time to rest before the next test.

```

120 PRINT CHR$(7):PRINT "GO! GO! GO!"
130 SB$=INKEY$
140 COUNTER=COUNTER+1 'increments counter
150 IF SB$=" " THEN 160 ELSE 130 'space in between quotes!
160 SECS=COUNTER/135
170 PRINT SECS;"seconds":PRINT
180 FOR PAUSE = 1 TO 1000:NEXT PAUSE

```

The program loops four times and then averages the total reaction time. With R=4, the program goes to line 230 to perform the actual calculation of your average reaction time.

```

190 TOTAL=SECS+TOTAL
200 R=R+1
210 IF R=4 THEN 230 ELSE 220
220 GOTO 30
230 PRINT "Your average reaction time is";TOTAL/4;"seconds."

```

The INPUT\$(1) command takes in any keyboard character and immediately jumps to the next line. The character is not echoed to the screen, and the RETURN key is not required after input. An upper or lower case "Y" allows the program to restart at the very beginning.

```

240 PRINT "Want to try it again?(Y or N)":J$=INPUT$(1)
250 IF J$="Y" THEN 10
260 IF J$="y" THEN 10
270 PRINT:PRINT " Bye! Thanks for playing."

```

That should do it! So there is no confusion, I do want to point out that COUNTER, DELAY, PAUSE, SECS, and TOTAL are all made up variable names. In other words, do not think they are built in or actual MBASIC functions.

Although this home stopwatch is not completely accurate, it does give you a way of comparing yourself to your computer buddies. An average time is probably around .21 seconds. Non-Osborne 1 owners will, of course, have a much slower reaction time!

Summary

```

10 CLEAR           'sets variables to zero
20 PRINT CHR$(26)  'clears screen, homes cursor
30 COUNTER=0       'sets counter to zero after every pass
40 A = INT(RND(1)*7000+1000)
50 PRINT "Hit the spacebar when signaled....."
60 FOR DELAY=1 TO A:NEXT DELAY
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250 IF J$="Y" THEN 10
260 IF J$="y" THEN 10
270 PRINT:PRINT " Bye! Thanks for playing."

```


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Too hot to handle

Fire research and the Osborne 1

Denise Caruso

Fires are tricky subjects to study: those who get too close tend to drop their calipers and race to the nearest water faucet. In the past, fire protection research was often limited to less heated tactics, such as predicting possibilities and examining ashes. This of course, was before the computer—and before fire protections specialists such as Brady Williamson and his crew brought in cool electronics to deal with their hot subjects.

Williamson, a professor at the University of California at Berkeley, heads the staff of the Fire Research Laboratory in Richmond, a hands-on test facility for his classes in the Civil Engineering department.

"We burn things up," he said of the work done at the Richmond Field Station off Highway 17. And, simply, that is just what they do.

The laboratory consists of a smallish "room" made of inflammable gypsum wall board, and a larger hood and smokestack. Both are tucked in the back corner of a glass and steel building, which also houses monolithic stress-testing structures used in experiments by upcoming civil engineers. Even without the sign, one can guess what the "room" is used for—a charred cone above the door is a sure sign that many a flame has roared outward and upward during the many tests performed there.

Although not a university-organized research unit in the same tradition as UC Berkeley's Livermore nuclear weapons testing lab, the Fire

Research Laboratory provides information to a number of government agencies. The National Bureau of Standards, according to Williamson, is one of the lab's more frequent clients as a seeker of information for fire codes and building standards. And recently Williamson and crew lit a trash fire in front of an electrical control cabinet as an experiment for the Nuclear Regulatory Commission. Members of the staff have even been called into private investigations such as the fire that recently rampaged through the Berkeley Hills.

The center's versatility is at least partially attributable to its "staff" of computers. Housed there is an array of hardware ranging from Osbornes to a PDP 11 to the Nova II, which records data derived directly from the flames.

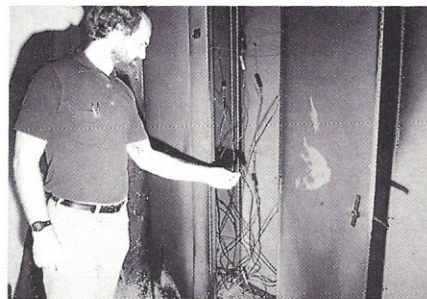
The Nova, programmed in Fortran, keeps Williamson and his team from relying on what he calls "ancient methods"—the manual notation of test conditions—for information acquisition. With a 100-channel capacity, the computer scores data from myriad heat-sensitive thermocouples wired throughout whatever type of compartment has been set afire. In addition, it scores from heat flux calorimeters which measure oxygen and gas flow in the smokestack. The computer then reduces the data and eventually compiles it into valuable graphs, which allows the staff to see exact changes that occurred during the course of the blaze.

This ease of data acquisition and

compilation has made the computer a valuable team member. Traditionally, said Williamson, fire protection engineers such as himself work in groups of two or three within a larger professional setting. They've had limited access to computers, and have been forced to compile data manually and have it typed into reports. "Few firms computed at all," he said.

But Fred Fisher, developmental engineer and manager of the Richmond facility, has learned the value of the computer-processed page. "If we lost our computer we'd simply be out of business," he said. "It saves literally thousands of hours putting together reports."

The Nova, however, is by no means the only invaluable hardware at the Fire Research Laboratory. Two Osbornes are hard at work as well. Williamson bought his Osborne about a year ago, specifically for his work at the center. Fred Mowrer, an associate specialist in fire protection for the University, owns the other.



Although both have BASIC software in addition to the standard SuperCalc, they found the more complex program unnecessary.

"The big surprise for me was how much I could do with the spread sheet," said Williamson. "Why use BASIC if you don't have to?"

Mowrer, a beginner, agreed. After buying his Osborne only a few months ago to "be literate" with computers, he is working in SuperCalc on a variety of different projects, from setting up sprinkler systems by calculations of hydraulics and friction loss, to detailed studies of heat transfer in "post-flashover," the period just after a fire has involved the entire volume of a room.

"I like the idea of using microcomputers to do computations," he said. And for good reason: using such features as the lookup table, which can refer a cell to a different location, and the tab feature which can protect certain parts of his format, Mowrer is able to do in minutes what took hours of work as a graduate student.

"Every one of us did this by hand," he said, gesturing at his screen. "A sheet of paper looked like that and we had to keep referring to a table for the correct values. This is art."

The nicest thing about this kind of art, though, is its practical application. The casual Osborne owner in all probability wouldn't be interested in the specific calculations that Mowrer,

Fisher and Williamson perform on their microcomputers, but engineer-types might find it behooves them to explore the possibilities of SuperCalc for whatever kind of problems they need to solve.

For example, even though fires are subject to many variables which include extreme fluctuations in temperature during what is called "pre-flashover," or the time during a fire when someone inside the room could still conceivably escape, Mowrer is debugging a program that can calculate assumptions about that phase based on the more uniform room temperatures that occur just after flashover.

So far, the pre-flashover factor itself can't be computed on the Osborne. "The variables are impossible to deal with," said Mowrer, noting that such a computation involves working in three dimensions. "It's been done on a PDP 11—the Harvard Fire Code—but it's really expensive. We haven't adapted that yet, not even on the PDP."

One thing he has adapted to the Osborne, however, is the set of calculations for setting up basic "Christmas tree" sprinkler systems, which like the name consist of a main trunk providing water to a series of branches. The problem is to ascertain what water pressure in the trunk will insure sufficient water pressure in turn to each of the outlets on the branches.

Williamson sees big possibilities for

the Osborne in the field, when the company develops a data acquisition bank (like Isaac for the Apple) which would interface at the 488 port.

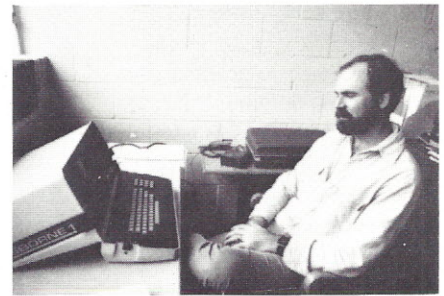
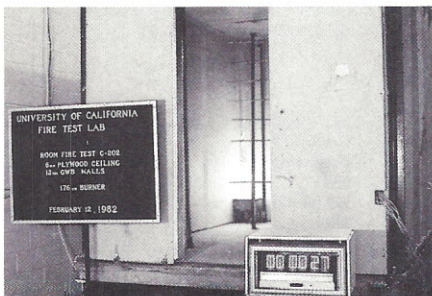
"In the field I have to resort to ancient methods—a person pushing a button and yelling 'Four hundred degrees!' while I look at my watch and write it down, '5 p.m., 400°,'" he said. "Data acquisition would be perfect for them (fire protection engineers)."

Williamson is also a fan of the Osborne because of its price, which he believes makes it more accessible for the small departments that need it. "For \$1,800 (sic)," he said, "they can almost buy one out of the petty cash drawer."

Greater accessibility would be a boon to all concerned, providing a greater capacity for on-site research and allowing field engineers to give additional valuable data to facilities like the one in Richmond.

The goal of this research is, of course, to prevent fires. And by being more able to predict a fire's behavior under given circumstances, fire protection engineers will be more able in turn to provide solid information to both builders and those devising construction standards which help keep buildings safe.

"Ideally," said Mowrer, "we'll be able to set up protection systems tailor-made. And because of computer exactitude, we can devise building codes based on a better understanding of fire phenomena." ■



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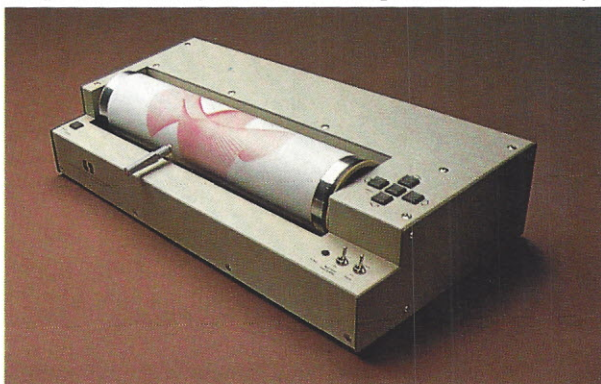


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A guide to accessories for your Osborne 1



The Osborne 1 is a product that has attracted a lot of interest from the "add-on" industry and Other Equipment Manufacturers (OEMs) resulting in greater capabilities for your Osborne 1. This catalog was put together to provide you with a convenient resource for information on the wide variety of hardware accessories & enhancements available for the Osborne 1, some of which you may not be familiar with.

For example, did you know that there are products that provide multiple selectable baud rates? Or a device that lets the Ozzie connect to 2, 3, or 4 peripherals from one port? How about converting your IEEE bus into a high speed serial port?

Interested in Uninterruptable Power Supplies? We describe several other of them, along with battery packs and DC inverters. We also look at video adapters, modems, typewriters interfaces, computer furniture, plus several items of interest.

We encourage you to call or visit your authorized Osborne dealer as some of the products are sold through the dealer network.

The prices given in this catalog are suggested retail and are subject to change.

—Brad Baldwin
Technical Editor

A

C E S S O R I E S

MODEMS

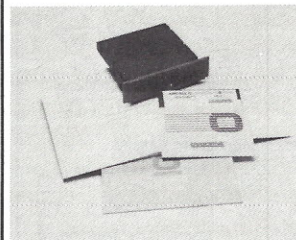
The addition of a modem to your system opens the doors to unlimited opportunities. For example:

- Newspapers, magazines, and independent news services are beginning to encourage and accept articles submitted from outside sources by modem.
- Sophisticated data bases and information networks are available by modem from several major organizations.
- Public access bulletin boards are springing up all over providing a network for friendly exchange of information with other users. These same bulletin boards usually have extensive libraries of free public domain software.
- Simply sending or receiving information for whatever the reason. Send urgent files to the branch office across the country; exchange your MBASIC programs with a friend across town; or tie into a college's mainframe computer system from your home.

Osborne's COMM-PAC modem is a 300 baud, auto-dial, auto-answer unit that fits into the left-hand diskette storage

pocket and operates from the MODEM socket. (Connecting to the modem port frees your serial RS232 port for printers.) With the modem comes the **AMCALL** communications software package. It is preconfigured for the Osborne, and requires no understanding of communications or programming to install. Some of the operating features of AMCALL are:

- time sharing terminal emulation—the Osborne can act as a terminal communicating with a mainframe
 - bidirectional file transfer between the Osborne and time sharing computers
 - error free file transfers between computers
 - ASCII and non-ASCII file transfer
- Included with COMM-PAC is a free trial subscription to The Source and Dow Jones. Price: \$265.



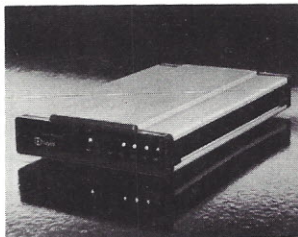
The **SIGNALMAN MARK V** modem by **Anchor Automation** is also designed for the Osborne MODEM port. It is a direct connect, 300 baud, automatic answer/originate unit that runs on a 9 volt battery or a 110 VAC adapter (not included). The **Computer Cannery** of San Jose has advertised it at \$129.95.



If 1200 baud modems are what you are looking for, then check out the **Novation 212 AUTO-CAT 1200**



or the **Hayes SMARTMODEM 1200**.

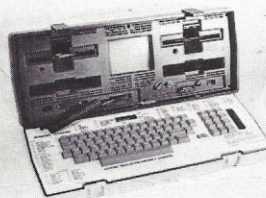


They share similar features: auto answer, auto dial/originate, auto disconnect, direct connect, and manual operating modes as well. They use the RS232 port and an external AC power source to operate on. These sophisticated modems are priced at around \$600 to \$700

REFERENCE CHARTS

Tired of fumbling through the menus or manuals looking for that certain WordStar or dBASE II command? Well, hunt no longer.

Creative Computer Products has designed a plastic **template** with printed program commands that fits onto the keyboard. The template is color coordinated and designed to fit either the beige or blue/grey case. SuperCalc and MBASIC templates are also available. Price: \$19.95.



Kara Enterprises offers a different approach to the problem of having WordStar commands at your fingertips. They manufacture a **WordStar Quick Reference Card** that contains the editing, dot, and no-file commands. These are organized, classified, synonymized, indexed, and cross indexed with references to the appropriate pages in the new **Osborne User's Guide**. There are over 60 headings with a total of 216 entries all fitting onto a card the exact size of a diskette. The recommended retail price is under \$2.50 and is sold only through Osborne dealers.

VIDEO ADAPTERS

Composite video adapters enable the use of any standard video monitor with the Osborne 1. They plug directly into the Ozzie's external video jack-replacing the video "dummy" plug-and require no modification at all. Video adapters will generally drive bridging, loop thru, or 75 ohm terminated inputs. That means you can use more than one monitor at a time, and the Osborne internal monitor remains functional. This is ideal for group demonstrations where the instructor requires the vision of the audience. Manufacturer, product, and price:

JMM Enterprises, EX-MON, \$39.95

Rocky Mountain Data, OZMOD, \$39.95

Integrated Systems, CVA-1, \$34.95.

(Interested in using a TV off of the Osborne? Contact JMM or Rocky Mountain Data for further information on RF modulator products. The visual quality is generally not as good in comparison to video monitors.)

SWITCHABLE BAUD RATES

How would you like your Osborne 1 to communicate serially at 19200 baud? 50 baud? 9600 baud?

With **Advent Product's OSBAUD** device, you can easily select any of those rates plus 13 others in between. The applications for the OSBAUD are many. Transferring files at 19200 baud between computers is 16 times faster than using 1200 baud, without compromising reliability. High speed serial printers are not high speed unless the information goes to the printer faster than it prints.



At the other end of the spectrum is the occasional need for slower baud rates. For example, most teletype machines operate at 110 baud; OSBAUD enables the Osborne to talk to these snail slow devices.

OSBAUD is attached inside the computer, so

some technical competency is required. Price: \$59.95.

The **TNW Corporation's** approach to driving serial devices at different baud rates is different than that of Advent's. Their completely external device uses Osborne's IEEE-488 port and converts the signal to RS-232 standard. Because the IEEE port provides for faster data transfer than the serial port, TNW is able to control the baud rate over the range of 110 to 9600. Call or write TNW for prices and further information.

CABLES

Designing and building your own printer cable is no longer necessary. Most Osborne Authorized Dealers have a supply of ready-made serial and Centronics cables, or will custom design and configure one for you. In addition to your dealer, there are at least six companies that sell by mail order (some distributing their product direct to the dealer):



- The Computer Cannery
- Computer Accessories Corporation
- JMM Enterprises
- Rocky Mountain Data
- Sudden Products Group
- The Bottom Line

Again, check with your dealer as these products may be available right off of the shelf. Prices will vary depending upon configuration, length, and printer type.

DATA BUFFER

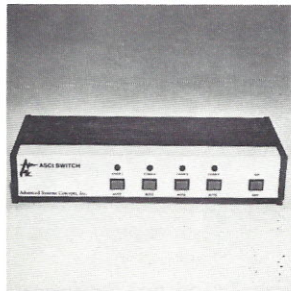
What's a data buffer, you ask? It's simply a storage device that speeds up the transfer of data between your computer and printer or modem. By loading the files quickly into a large buffer, printer and computer efficiency are both realized. A file can be down-loaded from the parallel port to a printer buffer in a matter of seconds immediately freeing the computer for other tasks. Meanwhile, the printer goes about its business printing the file.

The **PRINTER OPTIMIZER** made by **Applied Creative Technology, Inc.** provides a 64,000 to 256,000 character memory buffer. A whole double density diskette can be put into the Optimizer's buffer! The Optimizer can also be used to convert data, send control sequences, pause on cue, and access special printer functions merely by pushing the proper buttons on its keypad. Additional information and prices are available upon request by writing or calling Applied Creative Technology.

PORT EXPANDERS

How do you connect a letter quality printer, a dot-matrix printer, a modem, and a plotter to your Osborne 1...without fumbling with cables? Or, how do two Ozzies use the same modem or printer—again without switching cables back and forth?

As you may have guessed from the heading of this section, the answer is "port expander."



Up to four serial peripheral devices are connected to **Advanced Systems Concept's ASCII QUAD SWITCH**. This device accepts data and distributes it to one of four output ports. All of this can be done without changing software or hardware by embedding codes in the text.

The two port **ASCII SWITCH**, also designed by Advanced Systems Concepts, enables two computers to share a single printer or modem—without

the hassle of changing cables, or turning knobs. (A recent press release announced a **Model MOTI** four port device.) Prices and further information are available from the manufacturer.

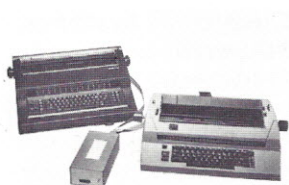
TNW Corporation—experts on Osborne's IEEE 488 hardware and software—have developed a unique product. The **TNW-2000 Serial Interface** module is an external box that operates from the IEEE 488 port, and interfaces to both serial and parallel peripherals. The TNW-2000 controls the baud rate over the range of 110 to 9600 baud.

It also has two IEEE ports and one serial port, allowing "daisy-chaining" of serial devices, if several TNW units were purchased. (Switches select the bus address. Or, use Osborne's new SETUP program to set the device address.) The TNW-2000 comes with a manual, technical notes, and cable. Price: \$229.

TYPEWRITER INTERFACES

Developing custom interfaces for typewriters has become quite a growth market. The reasons are simple: 1) Typewriters have keyboards. For a lot of reasons, having a keyboard on a printer is useful. Sometimes, one may want to pound out a quick note without going through the WordStar process. 2) Typewriters are already in the market. Someone purchasing a computer may not want to buy a printer if they already have a \$2000 typewriter. 3) Up until recently, letter quality printers were expensive; converting your typewriter to a printer made sense.

Escon Products Incorporated has designed interfaces for IBM Selectrics I, II, and III. It does not change the appearance of the typewriter, nor does it affect the manual operation or alter key touch. There is no permanent modification of the typewriter and IBM warranty or service is not affected. The custom designed electromechanical unit fits precisely into the Selectric's chassis. Solenoids utilize 32 volts for actuation from the electronic interface.



The price is \$840 (includes factory installation and all options wired).

Three companies supply IBM Electronic Typewriter 50, 60, and 75 interfacing: **Escon, Applied Creative Technology, and Wholesale Suppliers.** Prices range around \$400-\$450.

Wholesale Suppliers has advertised \$395 interfaces for Adler-Royal, Olympus, Brother, Silverreed, and Smith-Corona. Escon makes an Olivetti 121 and 221 interface.

The hottest low-cost electronic typewriter on the market today is the **Olivetti Praxis 30 and 35.** For under \$750 you can get a letter quality, daisy wheel typewriter that is light-weight and portable (22 lbs), although slow. (Runs at 12 cps.)

Some of the Praxis's features are worth noting:

- automatic correction tape (uses the IBM correcting tape)
- alternate keyboard selection to choose

foreign characters

- automatic repeat of last key entered
- 10, 12, and 15 pitch selection
- express backspace plus several other sophisticated abilities as well as standard typewriter features.

Olive Branch Association's OLIVE-1 serial interface is contained outside the Praxis while **Selectone Corporation's MICRO-TYPE** interface connects directly inside the printer. Selectone offers both a serial and parallel package.

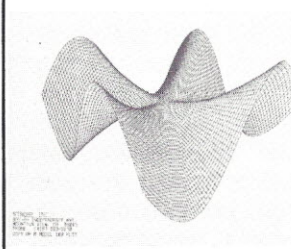
Prices: (Olive Branch OLIVE-1, \$249; Praxis 30 and factory-installed interface, \$749.

(Selectone) MICRO-TYPE, \$195; Praxis 30 and factory-installed interface, \$695. \$795 for the Praxis 35.



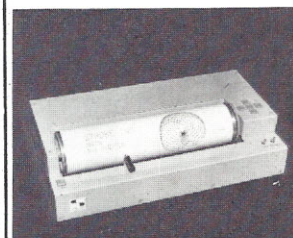
PLOTTER

Anyone who has seen the colorful **STROBE Graphics System** ad probably already knows what a plotter is and does. Briefly then, the Strobe plotter is an excellent tool for visually communicating normally boring and non-descript data. Dull facts come to life when written on a multi-color pie or bar chart. Also, the Strobe plotter is an educational and artistic tool; some of the isometric plots drawn from complex mathematical equations are both beautiful and fascinating.



The business graphics software package comes with line, bar, and pie chart programs, and sells for \$145. Plot applications software (line and lettering) costs \$70. A parallel interface is standard; RS-232 interfacing is priced at \$95. The plotter itself has a suggested retail price of \$795. (The Strobe plotter was profiled in the August/September

issue of *The Portable Companion*.)

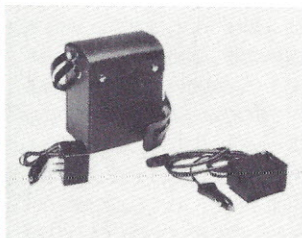


BATTERY PACKS & UPSs

The Osborne 1 portability concept is exemplified through the use of a battery pack. The Ozzie is set free from the wall socket allowing you to create and compute in the most remote locales.

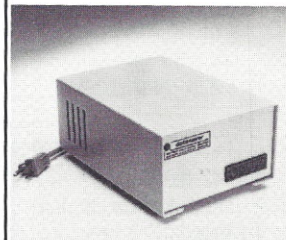
Uninterruptable Power Supplies (UPS) are special safeguards that protect your data against unexpected power failures and voltage drops.

Osborne Computer Corporation's POWR-PAC is a rechargeable 7 lb battery pack that runs your Osborne for a minimum one hour. POWR-PAC is connected directly to the 110 volt AC plug. Using the DC power inverter included with POWR-PAC lets you take your Osborne on the road by plugging into the car's 12 volt DC cigarette lighter (providing hours of use). Everything stores easily in a leatherette case. Price: \$345.



The BITS (Burns Industrial Technology Service, Inc) 13 lb battery pack provides 3-4 hours of power to the Osborne 1, and operates as an UPS with the optional regulated power supply. BITS plugs into the front battery port, thereby eliminating the computer's power supply. Other features are the auto cigarette jack, and battery status monitoring system, and leather-like carrying case. Price: BITS, \$295; UPS regulated power supply, \$75.

Cuesta System's DATASAVR is a self-contained battery powered AC backup unit (UPS) that switches on within 1/100th of a second upon loss or drop of line power. A front panel indicator light—as well as buzzer alarm—indicates that the DATASAVR is operating from its battery system. If operating at full rated output load, DATASAVR will supply up to 5 minutes of power—enough time for you to save your files before total AC power loss occurs. DATASAVR comes with an automatic battery charger. Price: 90 watt model, \$395.



A new battery pack and UPS on the scene is **Gamma Research's FIRE-FLY**. The press release for this product states that it will provide 5-6 hours of battery power and connects to the front battery port, like the BITS battery pack. All components and accessories can be carried in one case, and

automatic LED monitoring and charging is provided. The UPS is optional and so is a booster battery pack providing up to ten hours of power. Prices: FIREFLY with charger, \$178; UPS, \$74; Ten hour booster pack, \$80.

DUST COVERS

If your Ozzie resides at one location on a more-or-less permanent basis, you may be interested in purchasing a dust cover. Of course, the keyboard could be latched back onto the computer; however, you may not want to fuss with disconnecting the printer or external monitor cables.

SGW Enterprises ONTOP dust cover fits over the external monitor and the Osborne 1 (as long as the combined height does not exceed 22" high and the width of the monitor top does not exceed 14½"). It is made with anti-static heavy gauge stitched vinyl. Price: \$15.95.

Creative Computer Products, B.L.&W, and SGW make "stand-alone" computer covers if there is no external monitor. Prices are around \$15.

CARRYING CASE

A carrying case for a computer that already has its own built in handle and case may seem rather odd. However, you may not want the case of your Osborne getting scuffed and marred. Also, a carrying case gives you the added convenience of easily transporting manuals and other reference material.

Desert Computer Product's DESERT CASE comes in either vinyl or leather, prices \$57.95 and \$99.95 respectively. Westwind's OZGUARD case costs \$60. JMM Enterprises has one for \$59.95.

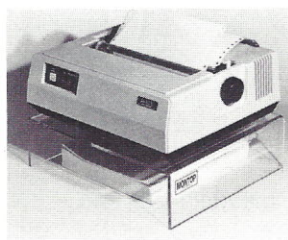
TABLETOP PRINTER STANDS

Where do you store the form feed paper for your Epson? On the floor? Jammed behind the printer? By elevating the printer on a stand, the paper can be stored and fed from below.

Apogee Design's stand allows four inches of paper to be stored underneath the printer

(Epson MX-80, Okidata 82A, NEC 8023 or similarly sized printer), and has a built-in shelf providing space for manuals. Price: glacier white or basic black, \$27.50. (Apogee's computer stand described below may be used as a printer stand for the longer light-weight printers.)

SGW Enterprise's 4" high MONTOP printer stand comes in two sizes: 14" x 13" or 20" x 13". The larger size is able to support the Epson MX100 or Okidata 83A comparably sized printers. Prices: \$29.95 and \$34.95.

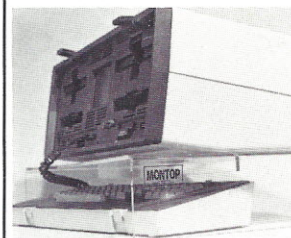


COMPUTER STANDS

Computer stands are additional space-saving products. A stand elevates the computer for better screen viewing. The new-case keyboard slides underneath when not in use leaving extra space on desk or table. (Or use the space for storage.)

SGW Enterprise's DOUBLE DECKER is a reinforced plexiglass stand priced at \$34.95.

Apogee Design's stand, like their printer stand, has a built-in shelf keeping manuals and supplies within easy reach. Price: \$29.50.

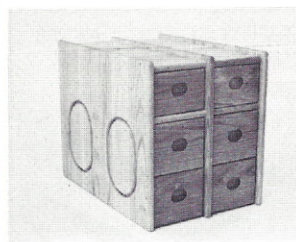


DISKETTE STORAGE

There are many floppy diskette storage units on the market, but perhaps none quite as elegant as FLOPPY DRAWERS manufactured by Venice Woodworking Company. Hand-crafted of quality solid ¾" oak with a hand-rubbed oil finish, the units feature contemporary modular design and a fastening system to make assembly quick and easy while allowing disassembly for rearranging and adding new modules.

Each Model F203 unit contains one random access drawer that pulls out and then drops down to an inclined position enabling the user to

select any one of up to 20 diskettes at a glance, with each label visible. Beneath this drawer are 2 bulk storage drawers containing four compartments. Each drawer holds 160 diskettes, so the entire FD203 unit holds 340 diskettes total. This unit is designed to function either individually or as the starting point for a larger configuration with the addition of any number of FD203A modules. Price: FD203, \$279.95; FD203A, \$239.95.



COMPUTER FURNITURE

The development of specialized furniture for computers and related products is a whole new growth market. More and more people are sitting at desks...with computers on them. Most furniture is woefully inadequate for computer use—the desk is too high...there is no place to put a monitor...printers compete for work space...hard disks sit on the dusty floor...and your

computer program listings snake up and over it all.



Enter the furniture designer/manufacturer. **The Wood Works** furniture set is functional and handsome. The different types of work stations shown in the picture are made from oak veneer with solid wood legs. Matching stands for monitors, shelves for hard disks, and stand-alone moveable printer tables are additional pieces in their set. The design is clean and simple—the most expensive piece costing only \$200 (Cherry and walnut optional.)

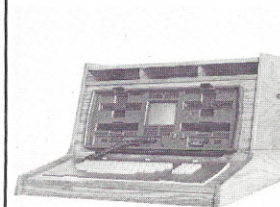
Williams & Foltz computer furniture is solid oak with quality features such as fingerjointed tops, rounded corners and edges, and hand-rubbed finish. The unique "Keyboard Cart" may be fitted with a pull-out breadboard for Ozzie's detachable keyboard so it sets at typing height.

Hard disk storage units or drawers may be fitted to any of the work stations. Prices range from \$290 for a printer cart to \$685 for a fully loaded "Work Station 6."

Although the Osborne 1 is a portable computer, many times it's used in one location only. With that concept in mind, the **OZZIE HOME** was developed. It's an oak veneer cabinet that the Osborne 1 drops into. Features include:

- level top for use with optional monitor
- ventilation back and bottom
- lighted on/off switch on the side
- simple assembly
- diskette storage compartments above computer
- 45 day money back guarantee

Available from **Roth Wood Products, Ltd.** for \$195.





MANUFACTURERS

Advanced Systems Concepts

P.O. Box Q
Altadena, CA 91001
(213) 794-2308

Advent Products, Inc.

965 N. Main St.
Orange, CA 92667
(714) 997-0800

Apogee Designs, Ltd.

3100 Fallscliff Rd.
Baltimore, MD 21211
(301) 235-7523

Applied Creative Technology, Inc.

2723 Avenue E. East,
Suite 717
Arlington, Texas 76011
(817) 261-6905
(800) 433-5373

BITS

6456 Danbury
Dallas, TX 75214
(214) 361-4815

The Bottom Line

Elm Street
Milford, NH 03055-0423
(603) 673-8857

B.L. & W.

P.O. Box 381076
Memphis, TN 38138
(901) 754-4465

Computer Accessories

10343 Roselle Street
San Diego, CA 92121
(619) 450-0852

Computer Cannery

P.O. Box 23425
San Jose, CA 95153
(408) 226-3184

Comsol

P.O. Box 206
Pt. Richmond, CA 94807

Creative Computer Products

P.O. Box 85152 MB 134
San Diego, Ca 92138
(619) 268-0793

Cuesta Systems, Inc.

3440 Roberto Court
San Luis Obispo, CA
93401
(805) 541-4160

Desert Computer Products

2304 N. Kachina
Chandler, Arizona 85224

DIPCO

1900 East 12th Street
Oakland, CA 94606

Easy View

P.O. Box 20595
Portland, Oregon 97220
(503) 256-4244

ESCON Products, Inc.

12919 Alcosta Boulevard
San Ramon, Ca 94583
(415) 820-1256

Gamma Research

6253 Hollywood Blvd.
Suite 711
Los Angeles, CA 90028
(213) 463-2345

HAYES Microcomputer Products, Inc.

5835 Peachtree Corners
East
Norcross, Georgia
30092
(404) 449-8791

Integrated Systems, Inc.

125 Sharon Avenue
Houghton, MI 49931
(906) 482-2305

JMM Enterprises

115 Battersby Street
Enumclaw, Washington
98022
(206) 835-1637

Kara Enterprises

245 Daytona Dr.
Goleta, CA 93117
(805) 685-2245

Novation, Inc.

18664 Oxnard St.
Tarzana, CA 91356
(213) 996-5060

The Olive Branch Association, Ltd.

26291 Production Ave.,
Suite 205
Hayward, CA 94545
(415) 887-5633

Rocky Mountain Data

9004 Menaul, NE
Albuquerque, New
Mexico 87112
(505) 294-8856

Roth Wood Products

2260 B. Canoas Garden
Road
San Jose, CA 95125
(408) 723-0330

Selectone

28301 Industrial Blvd,
Suite L
Hayward, CA 94545
(800) 227-0376 (Outside
CA)
(800) 421-5389 (Within
CA)

SGW Enterprises

P.O. Box 1015
Del Mar, Ca 92014
(714) 755-8324

STROBE

897-5A Independence
Avenue
Mountain View, CA
94043
(415) 969-5130

Sudden Products Group

1512-C Pualele Place
Honolulu, HI 96816
(808) 735-1955

TNW

3444 Hancock Street
San Diego, CA 92110
(714) 296-2115

Venice Wood Working

12810 Venice Blvd.
LA, CA 90066
(213) 390-4885

WESTWIND

484 Lakepark Ave.,
No. 141
Oakland, CA 94610
(415) 839-7169

Wholesale Suppliers

P.O. Box 22428
Carmel, CA 93922
(408) 373-0320

Williams & Foltz

1816 Fourth St.
Berkeley, CA 94710
(415) 644-2022

The Wood Works

11th & Haskell Rt. 2
Box 407
Lawrence, KS 66044
(913) 842-7797

NOTE: The prices listed in this Buyer's Guide are suggested manufacturer's retail prices for single unit purchases and may not reflect the true consumer list price. Computer retailers or peripheral distributors buy in bulk quantities and often receive discounts from the manufacturer; these savings are normally passed along to the consumer.

We suggest that you check with your favorite computer store or peripheral outlet before judging a product based on price alone.

DOUBLE DENSITY UPGRADES FOR THE OSBORNE1*

*OSBORNE 1 is a trademark of the Osborne Computer Corporation.

OSMOS IV

Winchester disks. Expand your capacity to unprecedented levels! Available in 5¼, 10½, 15¾ & 21 MByte units — a 42 Megabyte max. capacity!
from \$2475 to \$3650

OSMOS III

Double-sided Double Density/Double Tracking
Replaces both drives with CDC Double-sided Double Density/Double Tracking drives.
More than 1 Megabyte of portability!
\$1495

OSMOS II

Double-sided Double Density. Replaces one or both drives with CDC double-sided Double Density drives. Can still read Osborne Single Density disks.
\$335 plus \$375 per drive. (If you replace one drive, you still get single-sided DD on the other).

OSMOS I

Single-sided Double Density. Uses existing drives and disk controller. Can still read Single Density Osborne disks.
\$195 Install it yourself and **save \$100** on Osborne's charge!

OSMOSIS upgrades are supplied as kits for existing units. There is a piggyback disk expander board which fits onto the main Osborne electronics board. Quick, easy assembly instructions are provided.

Send checks and money orders to:



A more concentrated solution

Suite 6, 1554 Market Street, San Francisco, CA 94102. (Tel.) 415 864-6372

ADD 2.5% OF TOTAL ORDER VALUE FOR SHIPPING.
CALIFORNIA RESIDENTS ADD 6½% SALES TAX.

OSMOS is a trademark of OSMOSIS, a division of COMPU-LINE CORPORATION.
Purchase and installation of the items advertised may void the warranty on your Osborne computer.

Tax deductions on your computer

How to write off trade and business uses

Guy M. Wong

Generally, in order to take a tax deduction on your Osborne 1, you must be able to prove that the use of your computer and related software:

1. Is connected with your trade, business or profession, and
2. Meets the "ordinary and necessary" test.

Unless all or part of the costs relative to use of the computer are reimbursed, or you are an outside salesman, the deduction should generally be treated as a miscellaneous deduction in Schedule A of your Form 1040. Therefore, you are out of luck if you use the short forms (Forms 1040A and 1040EZ).

The performance of services as an employee is a trade of business. Therefore, if you use your computer in your work, whether in the office or at home, you meet test number one.

An expense is "ordinary" if it is customary or usual in your field of business. In a Supreme Court decision it was held that an expense is "ordinary" if it can be expected to arise with some degree of constancy in the particular business; cautioning that the expenses need not be habitual or normal in the sense that the taxpayer would have to make them often.

A "necessary" expense is one which is appropriate and helpful in developing and maintaining your business. It need not be essential or indispensable. Usually, your judgment as to what is necessary will be accepted. Expenditures are deductible as ordinary and necessary even if they turn out to be unwise.

How Much Can I Deduct?

You may deduct the amount paid during the taxable year that qualifies

under the two tests. Under the Economic Recovery Tax Act of 1981, Section 179 of the Internal Revenue Code was amended to allow taxpayers to treat the cost of qualifying property as an expense rather than a capital expenditure. This Section 179 deduction is limited to \$5,000 in 1982, increased to \$7,500 in 1984 and \$10,000 in 1986 and thereafter. Most Osborne owners deduct the entire portion of the cost relative to business use.

If you choose to capitalize your Osborne 1 and take depreciation expense, you will depreciate the Osborne over a five year period (unless the computer is used in research and experimentation, in which case, three years). During the five year period, you may depreciate the qualifying cost of the computer at the following percentages:

Year	Percent
1	15
2	22
3	21
4	21
5	21

For many microcomputer owners, the computer is not used exclusively for business. In that case, the amount of your miscellaneous unreimbursed employee business expense is limited to the percentage of business use. The only tax deductible portion for personal use occurs if you use the computer to keep track of your personal income and deductions for preparation of your income tax return. For example, you bought your Osborne 1 for \$1,795 and spent 40% of the computer time for business use, 10%

of the computer time for tax preparation purposes and the remaining 50% of the time for other personal use.

Then 40% or \$718 qualifies as a miscellaneous business deduction and 10% or \$179 qualifies as miscellaneous tax preparation deduction. The remaining 50% of the time is not deductible.

Do I Get Investment Tax Credit?

Qualified equipment used in a trade or business that is capitalized and depreciated over a five year period qualifies for a 10% investment tax credit (6% for three year property that is used in research and experimentation). Using the same example, if you capitalize your Osborne 1 and 40% is for business use, then \$718 qualifies for the 10% investment tax credit, you can subtract \$72 from your income tax liability on line 41 of Form 1040, and depreciate the \$718 over a five year period. You must, however, use Form 3468 to calculate the amount of investment tax credit.

Effect of New Tax Law

The Tax Equity and Fiscal Responsibility Act of 1982 reduces certain business incentives if the computer is placed in business service after December 31, 1982. In 1983 and thereafter, you will have to reduce the 10% investment tax credit to 8%, or reduce the depreciation basis of \$718 by one-half of the amount of investment tax credit taken (\$36) to \$682. The new tax law has no effect on computers placed in service before 1983.

The above discussion is a brief overview of the deductibility of use of your Osborne 1 at work, for federal income tax purposes. It should be used only as a reference for discussion with your tax advisor. The decision as to whether you should take a deduction should be made jointly by you and your tax adviser. (Mr. Wong is a certified public accountant with Gordon, Odom, Davis, Olin & Wong, in Sacramento, California.)

For the year January 1–December 31, 1982, or other tax year beginning

Use IRS label. Otherwise, please print or type.
 Your first name and initial (if joint return, also give spouse's name and initial)
 Present home address (Number and street, including apartment number, or rural)
 City, town or post office, State and ZIP code

NOW, A NEW SELF-TEACHING PERSONAL INCOME TAX PREPARATION SYSTEM FOR YOUR OSBORNE COMPUTER

Presidential Election Campaign ☐ Do you want \$1 to go to this? If joint return, does your spouse?

Filing Status
 Check only one box.
 1 ☐ Single
 2 ☐ Married
 3 ☐ Married
 4 ☐
 5 ☐

Exemptions

Always check the box for:
 Yourself
 Other
 by

HomeTax™ by Learning Shack™

Here's how you can get the first self-teaching personal Federal Income Tax preparation system for your home computer featuring AutoLearn™.

Prepare Your Tax Returns with HomeTax™

Imagine how easy it will be to prepare your 1040 Income Tax Return on your own computer using the Learning Shack™ HomeTax™ system. You don't have to be a tax expert and you don't need to purchase tax books or pay outside tax preparation fees. You don't even need a documentation manual with your HomeTax™ system because the user-friendly program will ask you all the questions that the professional tax preparer would ask, right on the CRT screen! You simply enter the answers and the program goes to work for you. It uses your computer to process the information and print the completed return on plain paper. A special 1040 transparency is included with the program which is placed over the printout and your finished tax return is made on a copy machine ready for your signature.

Your Personal Tax Planning System

In addition to helping you prepare your income tax return, your HomeTax™ program can be used in a "what if" mode to help you with tax planning. A "Tax Planning Strategies Manual" that you can use to project the tax consequences for different situations is included with your program. This can save you many times the cost of the HomeTax™ System!

Your HomeTax™ program is also compatible with another user-friendly system available from the Learning Shack™ called HomeRecord™ — a system that allows you to record current expenses throughout the year and provides you with monthly financial information which automatically flows into the HomeTax™ system at the end of the year.

A Toll-Free Number to Answer Your Tax Questions

When you use the HomeTax™ system, you get more than a computer program. You get a complete tax service! If you have any questions regarding the preparation of your income tax return when using the HomeTax™ system, just give us a call. Our technical staff will be on hand to answer any tax questions you may have. In addition you will receive periodic news releases concerning important changes in the tax laws.

What About Next Year?

Every year there are revisions in the tax laws. Learning Shack™ will provide you, for a nominal charge, with annual renewal diskettes to update your HomeTax™ system which will reflect these new tax laws.

Osborne 1 is a Trademark of Osborne Computer Corporation
 CP/M is a Registered Trademark of Digital Research Apple is a Trademark of Apple Computer, Inc.

Your Computer System may be Tax Deductible

Your HomeTax™ system is tax deductible. Also, if you plan to purchase your computer system in 1983, you may be able to write off a substantial part of the entire system if it is used for assembling data and preparing taxes. Included with your HomeTax™ system is a description of many tax deductible uses for your computer.

Hardware Requirements

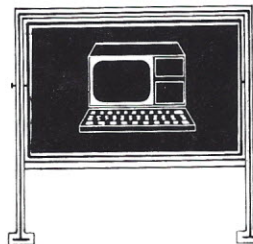
HomeTax™ runs on most CP/M computers with dual disk drives and with at least 48k RAM. (Apple II requires Softcard.) Contact us if you have any questions regarding compatibility with your system.

Order by Mail or by Telephone!

Order your HomeTax™ system today! The price is only \$95.00 plus \$2.00 for shipping and handling. Remember, you can deduct this amount from this year's taxes if you order now before the end of the year! The time and taxes you save may even pay for the entire cost of the system!

To order by telephone call (800) 782-8678. (In California call (714) 966-6631.) Use your Master Card or Visa (we need your card number and expiration date).

To order by mail please enclose your check for \$95.00 (California residents add 6% sales tax) plus \$2.00 shipping and handling. Send payment to:



Learning Shack™ inc.

17981-J Sky Park Circle
 Irvine, California 92714

DEALER INQUIRIES INVITED.

Double trouble or value

Do two salaries really add up to more?

Harry V. Mease

(For those readers who are unfamiliar with random access files, Mr. Mease's program provides an excellent working example on how they can be used. We also include a sidebar that briefly explains the various elements of creating and accessing random files. So even if the "two salary" situation does not apply to you, check this program out for its educational content.)

Married couples: Do you have more money to spend when both of you are working for a salary? One usually assumes that two incomes are better than one; however, the added costs of child care, restaurant meals, travel expenses, and other items may reduce or nullify any actual financial benefits derived from a second income.

The calculations necessary to answer this question are tedious and become quite laborious when trying to compare several different situations. The following MBASIC program makes the task much easier.

Money you spend for taxes and expenses, including those associated with a second salary, are not readily available to spend as you desire. The money left over after taxes and expenses is referred to as "expendable income" and is expressed in this program as "Monthly Income Apparently Not Committed." The term "apparently" is used because this figure represents a "best guess situation," based on your best projection of estimated future expenses and income.

The figures following "Monthly Income Apparently Not Committed" are calculated to reflect expendable

income from one and then two salaries. This comparison aids in assessing the dollar advantage or disadvantage of a second salary.

The program assumes housing costs are rental rates, and the standard deduction (Zero Bracket Amount) built into the Tax Table is used. Therefore, a couple could enjoy more expendable income if they are buying their home and if their itemized deductions exceed \$3400.00 for 1982 Income Tax purposes. Assuming, of course, that their taxable income is below \$50,000.00 per annum.

Should itemized deductions be a factor, you should subtract \$3,400.00 from your total itemized deductions. The balance is then subtracted from any figures (or zero) in the program's "Other Income Per Annum." Use a negative figure if the result is negative and place in the program's "Other Income Per Annum" to obtain a better approximation in this situation. State and/or City income taxes were not included in the program, but should be considered.

No liability is assumed for any errors in this program or for the tax data used. Additionally, some assumptions are made which fit most situations, but for instance are not applicable to an incapacitated or student spouse who is deemed to have received \$200.00 per month income where there is one, and \$400.00 per month income where there are two or more qualifying dependents. In those areas where a family deviates from the normal situation, frequently an extrapolation can be made.

No effort has been made to establish a value for child care, cooking

and cleaning etc., if one member of the household handles these chores. But, the increase in these costs must be considered as a possibility, if both husband and wife are working. For that reason, the program may not give a complete financial picture for some situations. Domestic chores that are replaced by restaurants, laundries and other service organizations (i.e. day care) may reduce the advantage of any increase in expendable income.

Insurance is another area that is not covered by this program. The need for more life insurance may be a possibility when both husband and wife work outside the home. Adjustments in health and life insurance due to programs offered by the employer are also a factor in some cases. In any event, some thought should be given to this area.

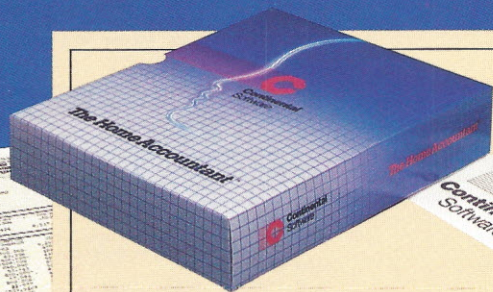
An increase in the amount of Individual Retirement Account (IRA) savings may also be a benefit of two salaries and is not calculated by this program. Social Security Benefits accumulate in the second wage earners account and are another advantage of two incomes.

The program does not attempt to calculate the psychological benefits and liabilities that families with two salaries face. Neither does the program evaluate the security that two salaries might provide a family. It is intended to be merely another tool to help a family evaluate more intelligently the monetary effects of a second salary. Since the results of this program are intended to give only a "ball park estimate," you should discuss the financial effects of implementing any decisions you arrive at with your accountant.

(Author's note: The Tax data used in this program was derived from Commerce Clearing House, INC's Economic Recovery Tax Act of 1981 and their 1982 Federal Tax Return Manual. Changes for 1983 tax data are included on the following page.)

For program listing see page 54.

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*The Home AccountantTM is available for the Apple II/IBM Personal Computer/Atari 400/800 Computers/Osborne/TRS 80 Model III/Commodore VIC 64. The actual budget capacities will vary with each computer.



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It sells the most, because it does the most!


```

10 ' THIS PROGRAM IS TO SIMULATE A MARRIED COUPLES
20 ' FINANCIAL SITUATION WITH ONE AND THEN BOTH
30 ' WORKING FOR A SALARY.
40 ' *****
50 WIDTH 52
60 OPEN "R",#1,"B:LOVING" 'OPENS RANDOM FILE FOR UPDATE
70 FIELD #1,9 AS AA$,4 AS AB$,2 AS MI$,9 AS AW$,4 AS AC$,6
   AS AX$,6 AS AY$,6 AS AX6$,6 AS AX7$,9 AS AN$,10 AS
   AP$,5 AS AK$,9 AS AD$
80 INPUT "2 DIGIT - SITUATION CODE ":"CODEX
90 GET #1,CODEX
100 PRINT CHR$(26)
110 X=0:Y=0:GOSUB 1630
120 PRINT "INPUT DATA FOR 1 OR 2 SALARIES (JOINT RETURN)"
130 PRINT "      ** YEARLY INPUT **"
140 A=CVD(AA$):PRINT "1- LARGEST SALARY $:";A
150 B=CVD(AB$):PRINT "2- LOWEST SALARY $:";B
160 IF A<B THEN GOSUB 1000
170 ' ** NO CHILDREN ALLOWANCE IF NO SECOND SALARY **
180 M=CVI(MI$):PRINT "3- TAX CREDIT FOR ";
190 IF B<=0 THEN M=0
200 IF M<=0 THEN PRINT "NO CHILDREN "
210 IF M=1 THEN PRINT "ONE CHILD "
220 IF M=2 THEN PRINT "2 CHILDREN "
230 W=CVD(AW$):PRINT "4- OTHER INCOME PER ANNUM $:";W
240 PRINT "      ** MONTHLY INPUT **"
250 C=CVD(AC$):PRINT "5- COST OF HOUSING PER MO. $:";C
260 X4=CVD(AX$):PRINT "6- PRICE OF FOOD PER MONTH $:";X4
270 X5=CVD(AY$):PRINT "7- COST OF UTILITIES PER MO. $:";X5
280 X6=CVD(AX6$):PRINT "8- CAR EXPENSES INCLUDING PAYMENT
   PER MO. $:";X6
290 X7=CVD(AX7$):PRINT "9- ALL OTHER COSTS PER MONTH $:";X7
300 PRINT "      ** MONTHLY INCREASE OR DECREASE-DUE 2ND SALARY
   **"
310 N=CVD(AN$):PRINT "10- CHILD CARE $:";N
320 P=CVD(AP$):PRINT "11- EATING OUT $:";P
330 K=CVD(AK$):PRINT "12- ADDED TRAVEL $:";K
340 D=CVD(AD$):PRINT "13- CLOTHING COSTS $:";D
350 PRINT CHR$(30)
360 X=0:Y=21:GOSUB 1630
370 INPUT "ENTER NUMBER OF SELECTION.  ENTER -DONE- TO EXIT
   ROUTINE ",V$
380 '
390 IF V$="DONE" THEN GOTO 450
400 LET E=VAL(V$)
410 IF E>13 THEN 350
420 IF E<1 THEN 350
430 ON E GOSUB 950,970,1020,1080,1100,1120,1140,1160,1190,
   1210,1230,1250,1270
440 GOTO 350
450 PUT #1,CODEX
460 ' *** TO REFLECT ALLOWANCE CLAIMED ON (FORM W-4)
470 IF A<32400 THEN R=A*.067 ELSE R=32400*.067
480 LET A1=(A+W)
490 LET A=(A1)-(1000*(2-M))
500 PRINT CHR$(26)
510 PRINT "***** ONE INCOME FAMILY *****"
520 PRINT
530 GOSUB 1290
540 PRINT "INCOME $:";A1/12;" FICA $:";R/12;" FED ICT $:";Q/12
550 LET X1=A1/12-(R+Q)/12:PRINT TAB(30);"MONTHLY TOT ";USING
   "$#####.##";X1
560 PRINT
570 X8=X4+X5+X6+X7+C
580 PRINT "ADD IN FOOD $:";X4;" AND UTIL $:";X5;" AND AUTO
   $:";X6;
590 PRINT "OTHER $:";X7;
600 PRINT TAB(38);"TOT ";USING "$#####.##";X8:PRINT
610 X9=X1-X8
620 PRINT "MONTHLY INCOME APPARENTLY NOT COMMITTED ";USING
   "$#####.##";X9
630 PRINT
640 B1=B
650 IF B<=0 THEN M=0
660 IF B>0 AND B<A GOTO 1980
670 A=A+B
680 A2=A+B1
690 GOSUB 1290
700 IF B1<=0 THEN GOTO 860
710 PRINT "***** TWO INCOME FAMILY *****"
720 PRINT
730 IF B1<32400 THEN R1=B1*.067 ELSE R1=32400*.067
740 R=R+R1
750 PRINT "INCOME $:";A2/12;" FICA $:";R/12;" FED ICT $:";Q/12
760 LET X1=A2/12-(R+Q)/12:PRINT TAB(30);"MONTHLY TOT ";USING
   "$#####.##";X1
770 PRINT
780 GOSUB 1660
790 J=(X8+P+K+D)-T
800 PRINT "CHILD CREDIT $:";T;"EATING OUT $:";P;"TRAVEL
   $:";K;"CLOTHING $:";D;
810 PRINT TAB(38);"TOT ";USING "$#####.##";J
820 PRINT
830 X9=X1-J
840 PRINT "MONTHLY INCOME APPARENTLY NOT COMMITTED ";USING
   "$#####.##";X9
850 PRINT
860 PRINT CHR$(30)
870 X=0:Y=23:GOSUB 1630
880 INPUT "LOOK AT ANOTHER SITUATION? (Y OR N) ",B$
890 'NEXT LINE PERMITS A RETURN TO A MENU PROGRAM
900 IF B$="N" THEN CLOSE #1:END 'OR:LOAD "B:MENU",R
910 IF B$="Y" THEN CLOSE #1:GOTO 60
920 IF B$<>"Y" GOTO 860
930 ' DATA UPDATER
940 ' REPAIR SUBROUTINES
950 X=4:Y=2:GOSUB 1630
960 INPUT "LARGEST SALARY $ ",A:LSET AA$=MKD$(A):RETURN
970 X=4:Y=3:GOSUB 1630
980 INPUT "LOWEST SALARY $ ",B:LSET AB$=MKD$(B):IF A>B THEN
   RETURN
990 IF A=B THEN RETURN
1000 X=4:Y=2:GOSUB 1630
1010 PRINT "NOT LOWEST SALARY ":RETURN
1020 X=4:Y=4:GOSUB 1630:INPUT "0-NO CHILD 1-ONE CHILD (X)
   NO. CHILDREN ",M:LSET MI$=MKI$(M)
1030 X=4:Y=4:GOSUB 1630
1040 PRINT "TAX CREDIT FOR ";
1050 IF M<=0 THEN PRINT "NO CHILDREN "
   :RETURN
1060 IF M=1 THEN PRINT "ONE CHILD "
   :RETURN
1070 IF M=2 THEN PRINT "2 CHILDREN "
   :RETURN
1080 X=4:Y=5:GOSUB 1630
1090 INPUT "OTHER INCOME PER ANNUM $:",W:LSET
   AW$=MKD$(W):RETURN
1100 X=4:Y=7:GOSUB 1630
1110 INPUT "COST OF HOUSING OR RENT $:",C:LSET
   AC$=MKD$(C):RETURN
1120 X=4:Y=8:GOSUB 1630
1130 INPUT "COST OF FOOD (MONTHLY) $:",X4:LSET
   AX$=MKD$(X4):RETURN
1140 X=4:Y=9:GOSUB 1630
1150 INPUT "UTILITIES (MONTHLY) $:",X5:LSET
   AY$=MKD$(X5):RETURN
1160 X=4:Y=10:GOSUB 1630
1170 INPUT "AUTO COSTS GAS, PAYMENT, ALL (MONTHLY)
   $:",X6:LSET AX6$=MKD$(X6)
1180 RETURN
1190 X=4:Y=11:GOSUB 1630
1200 INPUT "OTHER MONTHLY LIVING COSTS $:",X7:LSET
   AX7$=MKD$(X7):RETURN
1210 X=4:Y=13:GOSUB 1630
1220 INPUT "CHILD CARE $:",N:LSET AN$=MKD$(N):RETURN
1230 X=4:Y=14:GOSUB 1630
1240 INPUT "EATING OUT $ ",P:LSET AP$=MKD$(P):RETURN
1250 X=4:Y=15:GOSUB 1630
1260 INPUT "ADDED TRAVEL $:",K:LSET AK$=MKD$(K):RETURN
1270 X=4:Y=16:GOSUB 1630
1280 INPUT "CLOTHING COST $ ",D:LSET AD$=MKD$(D):RETURN
1290 ' THIS IS TAX TABLE FOR MARRIED (JOINT) 1982
1300 LET Q=0
1310 IF A>215400! THEN Q=95149!+.5*(A-215400!)
1320 IF Q>0 THEN RETURN
1330 IF A>162400! THEN Q=68649!+.5*(A-162400!)
1340 IF Q>0 THEN RETURN
1350 IF A>109400! THEN Q=42149!+.5*(A-109400!)
1360 IF Q>0 THEN RETURN
1370 IF A>85600! THEN Q=30249!+.5*(A-85600!)
1380 IF Q>0 THEN RETURN
1390 IF A>60000! THEN Q=17705+.49*(A-60000!)
1400 IF Q>0 THEN RETURN
1410 IF A>45800! THEN Q=11457+.44*(A-45800!)
1420 IF Q>0 THEN RETURN
1430 IF A>35200! THEN Q=7323+.39*(A-35200!)
1440 IF Q>0 THEN RETURN
1450 IF A>29900 THEN Q=5574+.33*(A-29900)
1460 IF Q>0 THEN RETURN
1470 IF A>24600 THEN Q=4037+.29*(A-24600)
1480 IF Q>0 THEN RETURN
1490 IF A>20200 THEN Q=2937+.25*(A-20200)
1500 IF Q>0 THEN RETURN
1510 IF A>16000 THEN Q=2013+.22*(A-16000)
1520 IF Q>0 THEN RETURN
1530 IF A>11900 THEN Q=1234+.19*(A-11900)
1540 IF Q>0 THEN RETURN
1550 IF A>7600 THEN Q=546+.16*(A-7600)
1560 IF Q>0 THEN RETURN
1570 IF A>5500 THEN Q=252+.14*(A-5500)
1580 IF Q>0 THEN RETURN
1590 IF A>3400 THEN Q=.12*(A-3400)
1600 IF A<3400 THEN Q=0
1610 RETURN
1620 STOP
1630 '***** CURSOR POSITIONING ROUTINE *****
1640 PRINT CHR$(27)+"="+CHR$(Y+32)+CHR$(X+32);
1650 RETURN
1660 ' ** DEPENDENT AND CHILD CARE TAX CREDIT ROUTINE **
1670 ' ** CHILDREN UNDER 15 AND OTHERS THAT QUALIFY **
1680 LET T=0:F=0:C1=0:C2=0
1690 IF M=0 THEN T=0:RETURN
1700 IF B>28001 THEN T=N*.2 :GOTO 1870
1710 IF B>26001 THEN T=N*.21 :GOTO 1880
1720 IF B>24001 THEN T=N*.22 :GOTO 1890
1730 IF B>22001 THEN T=N*.23 :GOTO 1900
1740 IF B>20001 THEN T=N*.24 :GOTO 1910
1750 IF B>18001 THEN T=N*.25 :GOTO 1920
1760 IF B>16001 THEN T=N*.26 :GOTO 1930
1770 IF B>14001 THEN T=N*.27 :GOTO 1940
1780 IF B>12001 THEN T=N*.28 :GOTO 1950
1790 IF B>10001 THEN T=N*.29 :GOTO 1960
1800 IF B>0 THEN T=N*.3:GOTO 1970
1810 IF M=2 THEN F=(C2/12)-T
1820 IF F<0 THEN F=(C2/12) :T=F
1830 IF F>0 THEN RETURN
1840 IF M=1 THEN F=(C1/12)-T
1850 IF F<0 THEN F=(C1/12) :T=F
1860 IF F>0 THEN RETURN
1870 C1=480:C2=960:GOTO 1810
1880 C1=504:C2=1008:GOTO 1810
1890 C1=528:C2=1056:GOTO 1810
1900 C1=552:C2=1104:GOTO 1810
1910 C1=576:C2=1152:GOTO 1810
1920 C1=600:C2=1200:GOTO 1810
1930 C1=624:C2=1248:GOTO 1810
1940 C1=648:C2=1296:GOTO 1810
1950 C1=672:C2=1344:GOTO 1810
1960 C1=696:C2=1392:GOTO 1810
1970 C1=720:C2=1440:GOTO 1810
1980 ' ** DEDUCTION FOR TWO SALARIES (JOINT RETURN) **
1990 U=B*.05 ' WILL CHANGE IN 1983
2000 IF U<1500 THEN B=B-U ELSE B=B-1500
2010 GOTO 670
2020 ' WRITTEN BY HARRY V. MEASE
2030 ' 5000 SURREY COURT
2040 ' FORT WORTH, TEXAS 76118
2050 ' OCTOBER 25,1982

```


Random access files

Although random files have several disadvantages in comparison to sequential files, there are three distinct advantages in using random access: 1) They require less room on the diskette because MBASIC stores them in a packed binary format, 2) the data can be accessed anywhere on the diskette without reading through all the information, and 3) records are easily changed or added to without having to copy the file.

By carefully scrutinizing the program, the important elements on creating and accessing a random file may be picked out. Refer to the Disk Files lesson in the *Osborne User's Manual* for a more complete discussion. Example statements from Harry Mease's program are discussed below.

60 OPEN "R",#1 "B:LOVING"

OPENs a file for random input/output access ("R" mode). The default record length of 128 bytes can be changed by adding a comma and integer after the filename ("B:LOVING", 64). #1 is a file number which will be associated with the file as long as it is OPEN. It is also used to refer other disk I/O statements to the file.

70 FIELD #1, 9 AS AA\$,4 AS AB\$,....etc.

The FIELD statement is used to allocate space and show the format in the random buffer for the variables that will be written to the random file. In this example, the first 9 bytes (positions) in the random file are allocated to the string variable AA\$, the next 4 bytes to AB\$, etc. The total number of bytes allocated in this FIELD statement must not exceed the record length that was specified in the OPEN statement (default—128). Line 70 allocates 85 bytes (9 + 4 + 2 + 9 + 4 etc).

90 GET #, CODE%

Moves the desired record into the random buffer. The record associated with CODE% is read into the buffer.

140 A = CVD (AA\$)

CVD is a MBASIC function that converts a string value to a number one. Numeric values that are read in from a random diskette file must be converted from strings back into numbers. CVD converts an 8-byte string to a double precision number. (CVI=2-byte, CVS=4-byte.)

1983 TAX DATA UPDATE

Program lines 470 and 730 will change when the Social Security Tax rate is changed from 6.7% thru \$32,400 income.

As arrived from the 1983 tax table:

```
1310 IF A>215400! THEN Q=91702+.5*(A-215400!)
1330 IF A>162400! THEN Q=65202+.5*(A-162400!)
1350 IF A>109400! THEN Q=38702+.5*(A-109400!)
1370 IF A>85600! THEN Q=27278+.48*(A-85600!)
1390 IF A>60000! THEN Q=16014+.44*(A-60000!)
1410 IF A>45800! THEN Q=10334+.44*(A-45800!)
1430 IF A>35200! THEN Q=6624+.35*(A-35200!)
1450 IF A>29900 THEN Q=5034+.3*(A-29900)
1470 IF A>24600 THEN Q=3656+.26*(A-24600)
1490 IF A>20200 THEN Q=2644+.23*(A-20200)
1510 IF A>16000 THEN Q=1846+.19*(A-16000)
1530 IF A>11900 THEN Q=1149+.17*(A-11900)
1550 IF A>7600 THEN Q=504+.15*(A-7600)
1570 IF A>5500 THEN Q=231+.13*(A-5500)
1590 IF A>3400 THEN Q=.11*(A-3400)
```

Economic Recovery Tax Act of 1981 -- New code Sec. 221:

```
1990 U=B*.1 'For tax years 1983 and
              subsequent until amended
2000 IF U<=3000 THEN B=B-U ELSE B=B-3000
```

Program lines 1660 through 1970 stay the same for the Tax Act of 1981 until amended.

H.V.M.

960....LSET AA\$=MKD\$(A)....

Moves data from memory to a random file buffer in preparation for a PUT statement. In the above example we are putting the contents of variable "A" in the buffer where AA\$ is FIELDed.

Any numeric value that is placed in a random file buffer with an LSET statement must be converted to a string. MKD\$ is a defined MBASIC function that converts a double precision number to an 8-byte string. (MKI\$ = integer, MKS\$ = single precision.) LSET left-justifies the string in the field.

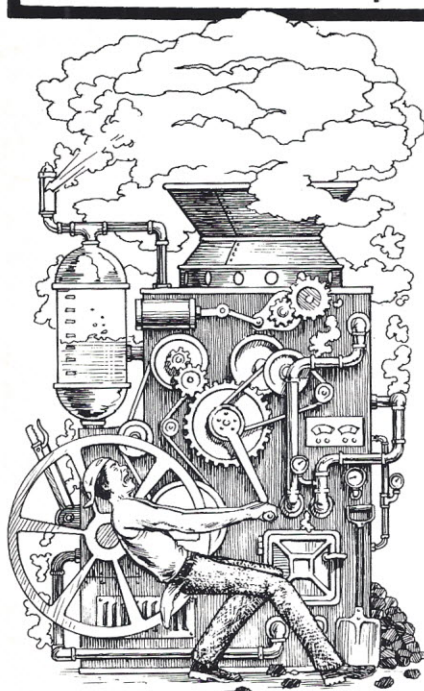
450 PUT #1, CODE%

The PUT statement, together with the LSET and FIELD statements, writes a record from a random bufer to a random disk file.

An excellent book on BASIC written by Ken Knecht, covers in detail random (and sequential) files. It is called *MICROSOFT BASIC* and is published by Dilithium Press, P.O. Box E, Beaverton, Oregon, 97075. The book may be ordered directly from the publisher by *writing* or, if in stock, off the shelf at your local computer store.

B. Baldwin

User Groups



User Group Update

The following previously unpublished users' groups have notified us of their existence:

New York

Niagra Frontier Osborne Group (NAIFROG)
c/o Gene Nelson
3435 Main Street
Buffalo, NY 14214
Founded October, 1982

Maryland

Greater Washington-Baltimore
Osborne Users' Group
c/o Richard L. Berman
13026 Old Stagecoach Rd.
Apartment 3715
Laurel, MD 20708
Meetings held in Howard County
Library. Monthly newsletter published
and extensive software library
available.

Western Massachusetts

Berkshire County Osborne Users'
Group
c/o Elliot Fenander
Hancock Road
Williamstown, MA 01267
OR
Bill Dudley
912 Cold Spring Road
Williamstown MA 01267
First meeting held October 22, 1982.

Canada

Vancouver Island Osborne Group
Jack Walraven, President
2840 Leigh Road
Victoria, B.C.
V9B 4G3
Meetings held every third Thursday of
the month at the Saanich Public
Library.

All the Scoop on Double Density

John Gaudio

It's here, it's here! That's right, double density Osbornes are now being sold, and people are signing up to have their machines upgraded to double density and 80 column screens. I haven't seen the 80 column screen yet, but I have been working with a double density system and it is beautiful.

There's now room to create one SUPERDISK, complete with WordStar, SuperCalc, MBASIC, and a few of the more popular CP/M programs. The new SETUP program allows you to temporarily change the arrow keys, printer type, the auto horizontal scroll option, without modifying the diskette and without having to reset the machine and press return. This makes it easy to switch from WordStar to SuperCalc to MBASIC etc. You can even set up special function keys (SFKs) to run SETUP and change the system automatically. For example you can toggle the arrow keys between WordStar and CP/M with a special function key programmed as:

☐ SETUP<CR><CR>MF<CR>M

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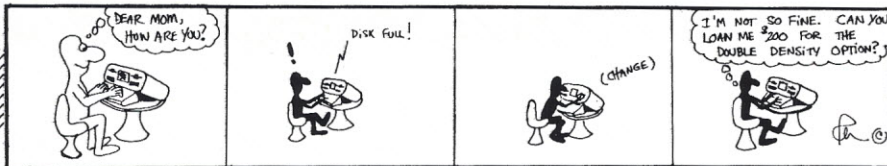
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remembering of course that <CR> means press the return key. It only takes five seconds from the time the SFK is pressed for the changes to be made. In fact you can now set up the system tracks for a particular task on the data disk to be used, so long as it's double density, and read that new system into memory quickly and easily. One warning though, don't try running SETUP from inside WordStar. Get out of WordStar, run the program from CP/M, and then run whatever other program you wish.

You'll notice that there are only four diskettes that come with the double density option. The BASICS diskette is pretty much the same, as is the SuperCalc disk. The WordStar disk has the INSTALL program on it, which was previously kept on the CP/M Utilities disk, and the CP/M System and Utilities diskettes are now combined into one.

Single density units allow 90K of usable storage (2K are taken up in overhead on both single and double density units). The double density units allow 183K. It used to be that the minimum file size was 2K, or about 2000 characters of diskette space, even though a file might hold only a single character. Further, under single density, every time more file space

was needed, an extra 2K had to be set aside. The double density format allows blocks of diskette space as small as 1K to be assigned to a file. Thus you can usually save more information using the same amount of diskette space.

With all this extra space, and the ability to create smaller files you may run into a problem if you try to put too many files on a single diskette. The limit appears to be 58 files, regardless of their size and the amount of room remaining. This is because the space assigned to handle the disk directory is limited, and only so many names will fit. I don't expect this to cause much of a problem.

I'm convinced that the only way to make people back up regularly is to make it easy for them. With double density there's enough room left on the WordStar System diskette to temporarily backup WordStar files on the A drive, using the block write command ^KW, while using the B drive as your main data diskette. Having this extra copy on a separate diskette gives you one more safety line in case of trouble.

The extra space also comes in real handy when you want to combine the files from several diskettes. Just put each of those diskettes in the right

drive, one at a time, and use the WordStar copy option to move files over to the WordStar System diskette. Once those files are there it's easy to copy them back over to a new data diskette in Drive B. Don't start getting into the habit of keeping files on the A drive. Use the extra room for temporary storage and keep the finished products on B.

Another thing, for the time being I'm still formatting and using most of my data diskettes in single density. I read and write my data diskettes using many different Osbornes, and not all of them have double density (yet). In the meantime it's much easier to have my work saved in a single density format so that those diskettes can be read by any Osborne computer. Of course the double density machines read and write single density formats just fine. In fact you don't even have to tell the Osborne what kind of diskette you've given it. It automatically recognizes it's own single and double density formats, the Xerox 820 format, the Cromemco format, and the format of the IBM PC. Additional formats are expected in the future. Osborne double density systems both read and write files in all those formats.

Some of the programs that come with the double density system have been changed. These include COPY,



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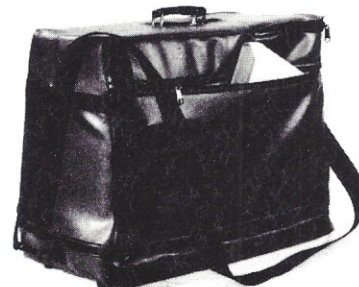
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User Groups

SYSGEN, MOVCPM and SETUP. SYSGEN and MOVCPM work just the way they used to, but the older versions won't work on the double density diskettes. COPY will duplicate a single or double density Osborne format diskette. Again you don't have to be concerned with the double/single density question, it's taken care of automatically. The easiest way to copy files from a diskette of one format to another format is through the program PIP. See page R-9 of the Osborne Users Guide for a review on using PIP.

You can also use the COPY program to format diskettes. Here you'll be asked if it's to be formatted for single or double density use, and you'll find that the screen looks just a little bit different while the diskettes are being formatted. There's **no** way on the Osborne to format disks for IBM PC, XEROX 820, or Cromemco formats.

That currently has to be done on the appropriate system.

The other differences you'll notice are in the SETUP program. We have lost 20 of the characters allocated for special function keys. I'd like to see that expanded rather than cut back, but everything has its price. There are now 76 additional characters available with double density. This compares with 96 additional characters under single density. The only other loss is that of 1K from the TPA (that stands for Transient Program Area, and that's where we run our programs), but these losses are far outweighed by the gains.

Additional features allow you to specify the device number of a Pet (IEEE-488) printer, and to put in a string of characters to initialize your printer. Another real handy feature allows you to read the current setup of the machine from memory, and store

your changes directly into the memory, without ever touching your diskettes. It's this feature that makes it practical to put WordStar, SuperCalc, and MBASIC on a single diskette, so long as you put SETUP on that diskette as well. In this case you use SETUP to temporarily change such things as the arrow key assignments and the auto scroll option for the program you wish to run. Then you run it.

The only problems I've had were minor ones. I did run into a few BDOS errors, but none of them ever cost me more than five minutes. I've also noticed some minor problems with the reset button at times. I strongly recommend double density to everyone. The added diskette space makes dBASE II an even more valuable package than it's been so far, and paves the way for the release of true accounting software that will run with a reasonable number of diskettes. I know that this will make even more software available and practical for use on the Osborne 1. April came a little bit late this year, but it's been well worth the wait.

Special thanks go to Toni Grant of the Denver Osborne Group for helping me to prepare this article.

(John Gaudio is the President of the Denver Osborne Group (DOG).)

Here's the way I set up my SUPERDISK:

AUTOST	.COM	2k SC	.COM24k	WSMSGs	.OVR	26k
COPY	.COM	5k SC	.HLP	9k WSOVLY1	.OVR	27k
MBASIC	.COM	24k SETUP	.COM	5k XDIR	.COM	3k
MERGPRIN	.OVR	8k SYSGEN	.COM	2k		
PIP	.COM	8k WS	.COM14k			

Disk A: 1K blocks Size = 185, 13 Files, Used = 159K, Space = 26K

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Auto Starting

Doug Hurst

Anyone who has taken their Osborne 1 out of the crate knows that all the system diskettes supplied as standard equipment have been fixed up with what is known as an "Auto Start" program. This will appear as AUTOST.COM on the disk directory. Its function is to allow you, the user, to be saved the trouble of first booting up the CP/M operating system, replacing that diskette with your system diskette then typing the file name and a <cr> to initiate your system program. This is great, especially for novices (which I consider myself) who have a tendency to reach for the reset button each time they change a diskette rather than exiting to the CP/M prompt.

Once you have purchased, written, or otherwise come by other system (COM) programs, however, you will notice the convenience of Auto Start is not present. Even Osborne OEM'd software, such as dBASE II, The Micro Link, Disk Doctor, etc, does not have this feature. That is until now. If you adhere to the following procedures you will be able to easily place an Auto Start on any system diskette you desire. Ready? Let's go.

First, boot up your system with the CP/M Utility diskette in the left (A) drive and a blank formatted disk in the right (B) drive. Type <cr> at the A> prompt, type SYSGEN <cr>. You will be prompted right through this operation as follows:

Operating System Generation Program
OSBORNE COMPUTER SYSTEM ONE
Revision 1.5

SOURCE Drive (A or B)—(You should pick A)
Put SOURCE diskette in drive A, then press RETURN
System read successfully.

DESTINATION (A, B or RETURN to exit)—(You should pick B)
Put DESTINATION diskette in B, then press RETURN.
System copied successfully.

DESTINATION (A, B or RETURN to exit)—(You should hit a <CR>)

You will want the A drive to be the SOURCE and the B drive to be the DESTINATION. After the drives stop running you will have CP/M on the diskette in Drive B. It will have been "SYSGEN'D". Type <CR>.

Now, replace the CP/M Utility diskette with the CP/M System diskette and perform a warm boot (^C). When you get the fresh A>, type PIP B: = A:AUTOST.COM<CR>. After the drives stop and you have another A>, type DIR B:<CR>, to make certain that AUTOST.COM transferred to the diskette in Drive B.

Next type PIP<cr>. After a moment the A> prompt will be replaced by a * prompt. Remove the CP/M System diskette from Drive A and replace it with a diskette that has the COM file you want to Auto Start. Once this diskette is in

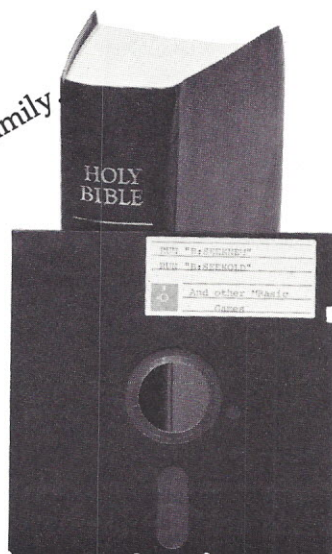
Continued on next page

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Price	\$395	\$595 to \$1,800 Depends on Dealer	\$200 to \$1,200 Depends on Dealer	\$159	\$416
Includes Payroll	YES	NO	YES	YES	YES
Fully-Integrated	YES	YES	YES	YES	NO
Ready-to-Run	YES	YES	YES	NO	YES
Audio Cassette Tape Start-up & Training Aid	YES	NO	NO	NO	NO
System "Road Map" Guide	YES	NO	NO	NO	NO
Free Users' Newsletter	YES	NO	NO	NO	NO
Source Code Included At No Extra Charge	YES	NO	YES	NO	NO
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Chart of Accounts with summary dollar amounts	Income Statement with prior year comparison
Chart of Accounts with this year/ prior year summary amounts	Departmental Income Statement(s)
Daily Transactions Report	Departmental Income Statement(s) with prior year comparison
Itemized Monthly Transactions	Detail report for individual accounts
Balance Sheet	Trial Balance Statement
Balance Sheet with prior year comparison	

Accounts Receivable

Daily Transactions Report	Summary Aging Report
Invoices (with or without pre-printed forms)	Detailed Aging Report
Statements (with or without pre-printed forms)	Itemized Monthly Transactions
	Customer Account Report
	Customer Activity Report

Accounts Payable

Daily Voucher Report	Transaction Register
Daily Credit Report	Open Voucher Report
Check Printing	Aging Report
Check Register	List of Vendors
Vendor Status Report	

Payroll

Employee Master Listing	General Ledger Transfer Report
Tax Table Listing	Quarterly Summary Report (State unemployment info.)
Payroll Check Register	941 Worksheet
Paycheck Printing	W-2 Printing
Monthly Summary Report	

SYSTEM CAPACITIES

Module	SD	DD	5Mb	10Mb	15Mb
General Ledger					
Accounts	100	200	400	400	400
Transactions	500	1,000	6,000	12,000	18,000
Accounts Receivable					
Customers	200	400	400	400	400
Transactions	400	800	6,000	12,000	18,000
Accounts Payable					
Vendors	200	400	400	400	400
Transactions	400	800	6,000	12,000	18,000
Payroll					
Employees	200	400	400	400	400

SYSTEM REQUIREMENTS

Microsoft BASIC; CP/M®; 56K RAM; two disk drives; 132 column printer (an Epson MX-80 printer with compressed mode is acceptable)

CP/M is a registered trademark of Digital Research Corp.

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User Groups

the A drive, type B: = A:XXXXXXXX.COM<CR>. The file is now transferring to Drive B. (Of course the XXX's will be replace with the name of your COM file). The first time I did this was with The Micro Link Communications program, so I typed ML.COM.

WARNING!! SOME COM FILES HAVE OTHER COM AND OVERLAY FILES ASSOCIATED WITH THEM. WORDSTAR AND dBASE II ARE THIS WAY. BE SURE TO PIP ALL THESE FILES OVER TO THE B DRIVE IN THE SAME MANNER AS YOU DID THE PRIMARY COM FILE.

EXAMPLE: *B: = A:XXXXXXXX.COM (MAIN COM FILE)
 *B: = A:YYYYYYYY.OVR (ASSOCIATED OVERLAY FILE)
 *B: = A:YYYYYYYY.COM (ASSOCIATED COM FILE)

After the drives stop running replace the diskette in Drive A (the one with your unglamorous COM files on it) with the CP/M Utility diskette once again. Type <cr>. This will take you back from the * prompt to the A> prompt and perform a warm boot. At this point you should have AUTOST.COM and XXXXXXXX.COM (possibly YYYYYYYY.OVR and YYYYYYYY.COM also) on the B drive if you check the directory.

Now we must modify the AUTOST.COM on Drive B so it will properly boot up your new primary COM file from a "cold" start situation. When this has been accomplished, you will be able to turn on your Osborne 1, put your new diskette in Drive A, type <cr> and have your COM file booted up real pretty with the Osborne logo and everything. Sound Good? Well, let's finish it off.

Type DDT B:AUTOST.COM<cr>. After a few moments you will see something like this on your screen:

```
A>DDT B:AUTOST.COM
DDT VERS 2.2
NEXT PC
0A00 0100
```

Your new prompt is the "-". The next couple of happenings may be quite alien to you but please do not be afraid. Type D0100<cr>.

This is what you will see:

```
-D0100
0100 2A 01 00 2E 00 7C D6 16 *. ....!..
0108 67 22 65 01 11 20 03 01 g"e.. ..
0110 FF 07 1A D6 41 12 13 0B ....A...
0118 78 B7 C2 12 01 11 73 01 x.....s.
0120 CD 60 01 11 00 F0 21 20 .^.....!
0128 03 01 00 07 ED B0 11 75 .....u
etc
```

Now, type D <cr> twice more. Here is what you will see.

```
-D
0160 0E 09 C3 05 00 21 34 04 .....!4.
0168 48 45 4C 50 00 00 00 00 HELP....
0170 00 00 00 1A 24 1B 3D 30 .....$.=0
0178 21 20 20 20 20 20 20 20 !
0180 20 20 20 20 20 20 20 20
etc
```

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-D

```
01C0 49 4E 47 20 43 50 2F 4D ING CP/M
01C8 20 41 4E 44 20 48 45 4C AND HEL
01D0 50 2E 2E 2E 20 20 20 20 P...
01D8 20 20 20 20 20 20 20 20
01E0 20 0D 0A 20 20 20 20 20 ..
01E8 20 20 20 20 20 20 20 20
etc
```

You will notice a column of four digit numbers on the far left, eight columns of two digit numbers in the middle and some strange looking characters and numbers with intermittent semi-legible characters over on the right. In the characters on the right you will recognize the words "HELP" and "LOADING CP/M AND HELP". This is what we are going to change. First, however, some explanation is in order.

The four digit numbers on the left are "hexidecimal" numbers, which represent memory addresses. The two digit numbers in the middle are the "hexidecimal" number contents of these memory addresses and the numbers and characters on the right are the ASCII equivalent of those two digit hexidecimal numbers in the middle. The hex addresses listed are eight numbers apart.

```
0168 48 45 4C 50 00 00 00 00 HELP....
0170 00 00 00 1A 24 1B 3D 30 ....$.=0
```

Where you see: **48**, the hex equivalent of the ASCII "H" is located at memory address 0168. Even though the address number 0169 is not printed, this is where the 45 hex resides (to the right of the underlined 48 hex). 016A holds the 4C (ASCII "L") etc. until you get up to 016F on the far right, which holds a 00 hex, and then back to the start of the next line which is 0170 and holds 00 hex.

We have to change the word "HELP" and also the wording after "LOADING" since we will not be loading CP/M AND HELP now. The word that will replace "HELP" is the name of your primary COM file minus the ".COM". The word after "LOADING" will describe your file.

EXAMPLE: If this were for WordStar, "HELP" would be replaced with "WS" and "CP/M AND HELP" would be replaced with "WordStar".

Ready to proceed with the actual change? It's not very hard.

Type S0168<cr>. You will see this:

-S0168 Note: the S function of the DDT program lists 0168 48—individual addresses, with current contents, and allows the user to change the contents of the address. This is what we are going to do.

Again I will use The Micro Link program for an example. The Micro Link is ML.COM.. So, in my case, I replaced "HELP" (48, 45, 4C, 50 hex) with "ML" (4D, 4C, 00, 00 hex). It looks something like this:

```
-S0168
0168 48 4D <cr>
0169 45 4C <cr>
016A 4C 00 <cr>
016B 50 00 <cr>
016C 00 _
```

Continued on next page

Write your own software library.

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User Groups

Note: the <cr>'s will not show on screen. The 00's just eliminate the LP in HELP.

The easiest thing to do now is to continue typing <cr>'s until you get to address 01C4. When you arrive it will look like this:

```
01C3 20
01C4 43
```

Now, replace CP/M AND HELP. It went like this for The Micro Link example:

```
01C4 43 4D <cr> M
01C5 50 69 <cr> i
01C6 2F 63 <cr> c
01C7 4D 72 <cr> r
01C8 20 6F <cr> o
01C9 41 4C <cr> l
01CA 4E 69 <cr> i
01CB 44 6E <cr> n
01CC 20 6B <cr> k
01CD 48 00 <cr>
01CE 45 00 <cr>
01CF 4C 00 <cr>
01D0 50 00 <cr>
01D1 2E 00 <cr>
01D2 2E 00 <cr>
01D3 2E 00 <cr>
01D4 20 _
```

Note: Again, this is my example. You would look up the hex equivalent of your ASCII characters and insert them. Be sure to use 0's (00 hex) or spaces (20 hex) to eliminate anything left over from "CP/M AND HELP".

Also, the <cr>'s and The Micro Link will not appear on the screen.

Almost done! All we have to do is make sure the change is saved permanently on the diskette. This is quite easy. At the last address type a period(.) and a <cr>, then a ^C. Like this:

```
01D3 2E 00
01D4 20 . <cr>
-^C
```

It should then look like this after the drives stop running:

```
01D3 2E 00
01D4 20 .
-^C
A>
```

Now type SAVE 10 B:AUTOST.COM <cr>. After a moment you should see this:

```
A> SAVE 10 B:AUTOST.COM<cr>
Note: The 10 means you
are saving 10
pages of hex memory.
```

That's it folks. You should be able to take your new diskette out of Drive B, hit the reset button, place it in Drive A, hit the <cr> and watch the fruits of your labor. The logo should pop onto the screen and proudly announce LOADING XXXXXXXX, and then go right into the .COM file execution.

(This article was reprinted from the FOGHORN, with permission.)



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A Program to Create PRINT Statements

Glenn C. Winters

Programs that create BASIC programs are becoming more common lately. This type of software is useful especially when tedious but dull programming can be replaced by the computer.

One of the duller steps in creating programs is writing the PRINT statements that display instructions to the program user. A friendly word processing package can lighten that chore and give a polished look to the display at the same time. But the word processing software won't number lines for you or provide the PRINT" at the beginning, and that essential " at the end, without tedious editing.

As an example, how many of you typed in Kelly Smith's program from the premiere issue of *The Portable Companion*? I did, and exactly as he described. Entering the user instruc-

TABLE 1
Microsoft BASIC Source Code for WRINST

```
10 CLEAR:DEFINT A-Z
20 PRINT CHR$(26):PRINT"DO YOU WANT INSTRUCTIONS?":A$=INPUT$(1)
30 IF A$="Y" THEN GOSUB 360
40 INPUT"NAME OF FILE TO BE READ":NF$
50 INPUT"NUMBER OF SCREENS OF TEXT":NS
60 DIM NL(NS)
70 FOR I=1 TO NS:PRINT"LINE ON SCREEN":I::INPUT NL(I):NEXT
80 INPUT"STARTING LINE NUMBER(DEFAULT IS 10)":SL:IF SL=0 THEN SL=10
90 INPUT"LINE SPACING(DEFAULT IS 10)":SP:IF SP=0 THEN SP=10
100 OPEN "R",#1,NF$,128:FIELD #1,128 AS AR$
110 OPEN "R",#2,"B:TEMP.DOC",66:FIELD #2,65 AS AW$,1 AS E$
120 GOSUB 220:"TO LOAD T$
130 NP=1:NL=1:T1$=""
140 Z1$="PRINT":Z2$=CHR$(34):Z3$=""
150 Z4$="":A$=INPUT$(1):PRINT CHR$(26)":Z5$="HIT ANY KEY TO PAGE"
160 IF NL>NL(NP) THEN GOSUB 280:" JUMP TO NEXT SCREEN
170 GOSUB 230:" EXTRACT 52 TEXT CHARACTERS FROM T$
180 T1$=STR$(SL)+" "+Z1$+Z2$+T1$+Z2$
190 SL=SL+SP:NL=NL+1
200 GOSUB 350:" PUT TO DISC
210 GOTO 160
220 GET #1:T$=AR$:RETURN
230 FOR N1=1 TO 53
240 T2$=LEFT$(T$,1):N2=LEN(T$):IF N2=1 THEN GOSUB 220 ELSE
T$=RIGHT$(T$,N2-1)
250 IF ASC(T2$)<31 THEN IF N1>1 GOTO 270 ELSE 240
260 T1$=T1$+T2$:NEXT N1:N1=53
270 T1$=LEFT$(T1$,N1-1):RETURN
280 IF NP=NS GOTO 320
290 T1$=STR$(SL)+" "+Z1$+Z3$+Z1$+Z2$+Z5$+Z2$+Z4$
300 GOSUB 350:" PUT TO DISC
310 NP=NP+1:SL=SL+SP:NL=1:RETURN
320 T1$=STR$(SL)+" "+Z1$+Z3$+Z1$+Z2$+"HIT ANY KEY TO RUN"+Z2$+Z4$
330 GOSUB 350:" PUT TO DISC
340 CLOSE #1:CLOSE #2:END
350 LSET AW$=T1$:RSET E$=CHR$(13):PUT #2:T1$="":RETURN
360 PRINT CHR$(26)
```

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User Groups

tions took me about an hour, just as his article predicted. More than half of that time was spent editing the instructional text to add line numbers and PRINT " and so on. Well there is a much faster way. Let the computer take your final text and add the rest of the words to make that text line a numbered PRINT statement. That's what WSRINST will do.

The text from WordStar, after processing with PIP, consists of text lines—as many characters long as you had set on the margins—each followed by three characters, a space, a carriage return and a line feed. Thus the text file can be scanned one character at a time to build up a string of text as many characters long as you wish. The non-printing characters at the end of each text line are discarded once they have been used as indicators of the end of a line of text. Essentially that's how WRINST works. Once a line of text has been extracted, the line number, PRINT and quotes are added to the string. Then the string is put on disk in another file. When all the text has been processed, this new file is a list of numbered PRINT statements, ready to MERGE with the rest of your source code.

```

370 PRINT "                                WRINST Instructions"
380 PRINT " "
390 PRINT "This program will take WordStar text and convert to"
400 PRINT "PRINT statements one text line at a time. Thus"
410 PRINT "program instructions may easily be added to a BASIC"
420 PRINT "program. These instructions are an example of the"
430 PRINT "use of WRINST. The instructions appear on the"
440 PRINT "screen exactly as written on WordStar."
450 PRINT:PRINT"HIT ANY KEY TO PAGE":A$=INPUT$(1):PRINT CHR$(26)
460 PRINT"The instructional text is first entered to disc with"
470 PRINT"WordStar as a document file. When entering text the"
480 PRINT"right margin should be set to 52 so that it is"
490 PRINT"unnecessary to scroll to see all the text. WRINST"
500 PRINT"expects the text to be setup this way. As you enter"
510 PRINT"text keep track of the number of seperate screens of"
520 PRINT"text to be displayed and the number of lines of text"
530 PRINT"on each screen. The program will ask for this data."
540 PRINT " "
550 PRINT"After the text is complete, you should carefully"
560 PRINT"review for typographical errors. It will be diffi-"
570 PRINT"cult to correct them later."
580 PRINT:PRINT"HIT ANY KEY TO PAGE":A$=INPUT$(1):PRINT CHR$(26)
590 PRINT"After the text file is saved to disc, PIP must be"
600 PRINT"used to modify the file. With PIP in drive A and"
610 PRINT"the text disc in drive B, the appropriate command"
620 PRINT"is: PIP B:filename=B:filename[Z]. Now the text"
630 PRINT"file is prepared to be converted to BASIC state-"
640 PRINT"ments."
650 PRINT:PRINT"HIT ANY KEY TO PAGE":A$=INPUT$(1):PRINT CHR$(26)
660 PRINT"Now enter WRINST. The program will ask for the"
670 PRINT"filename that contains the text. Include the source"
680 PRINT"drive if it is not the default drive. The program"
690 PRINT"then asks for the data on number of screens of text"
700 PRINT"and the number of text lines on each screen. Lastly"
710 PRINT"the program asks you to provide a line number for"
720 PRINT"the first PRINT statement and line spacing. The"
730 PRINT"value of 10 will be used in default if you do not"
740 PRINT"specify otherwise. That's all you need to run this"
750 PRINT"program."
760 PRINT:PRINT"HIT ANY KEY TO PAGE":A$=INPUT$(1):PRINT CHR$(26)
770 PRINT"When WRINST completes its task there will be a BASIC"
780 PRINT"program on disc B with the name TEMP.DOC. This may"
790 PRINT"then be MERGED with the rest of the source code for"
800 PRINT"your program."
810 PRINT"If you will now press any key, WRINST will continue."
820 PRINT:PRINT"HIT ANY KEY TO RUN":A$=INPUT$(1):PRINT CHR$(26)
830 RETURN

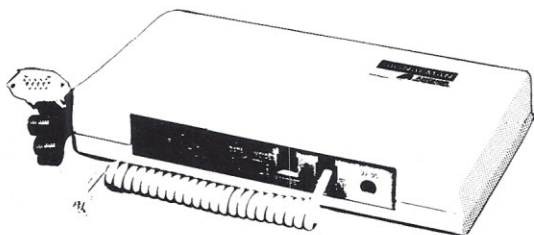
```

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A listing for WRINST is given in Table 1. Don't enter the PRINT statements in lines 370-820, let the program do that for you as its check-out run. Should take less than a minute.

The program has three idiosyncrasies:

1. Soft hyphens do not transfer to the PRINT statements. A little clean up editing fixes that.
2. To get a blank line, you must enter at least one space in the WordStar text.
3. Merge the PRINT statements to the rest of the source code, not the other possible order. If you do MERGE source code to the PRINT statements, the program won't LIST correctly (it overprints on my Epson).

Perhaps a reader can suggest modifications that fix these problems. Better yet, an assembly language version would be even faster.

(Mr. Winters is a member of the Capital District Osborne Group in New York.)

A Typewriter Becomes a Printer

Chris Russell

If you want the flexibility of a typewriter/printer combination for your Osborne, I suggest using a Silver Reed EX55 (around \$1200.00) and the Wilker Daisy Typeface (around \$300.00). The Silver Reed is an excellent letter quality printer. The Wilker's selected the Silver Reed over others because it had less down time when used as a printer for any length of time.

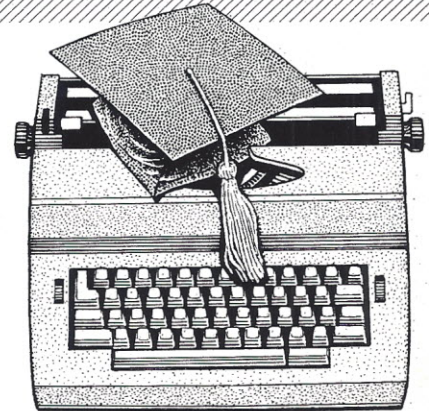
The Wilker Daisy Typeface consists of a printed circuit board that the user can easily connect inside the Silver Reed and the other end of the cable connects to the Osborne's RS232 port with a straight-through pin configuration.

Along with the hardware connection use the SET-UP procedure from CP/M with:

- a) Diablo X-ON, X-OFF
- b) Select either 300 or 1200 baud

and use the INSTALL procedure from WordStar with:

- a) Select Teletype like printer with backspace



b) Select X-ON, X-OFF as communication protocol

c) Select TTY as device output

You can also optimize the Silver Reed by changing WordStar's control codes to those of the Wilker Daisy Typeface, but this author was not brave enough as yet and this set up works just fine for me.

I also found the printer quality of the Silver Reed excellent and "hook-up" procedure very straightforward. I would fearlessly recommend this combination. A demonstration can be arranged by calling Patrick Keown, (415/969-2666) Silver Reed; Jerry Medina, (415/828-6802) Wilker Daisy Typeface. These are California numbers.

(Chris Russell is a FOG member and this article was reprinted, with permission, from the FOG newsletter.)

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This popular program handles a calendar and appointment schedules for two people or offices (using Osborne 1 single density), keeping an accurate and complete schedule for the busy executive or professional. Personal Datebook saves frustration when trying to find a convenient time for a staff conference—it automatically finds a time when all staff members are available. A valuable tool for time management, Personal Datebook keeps a permanent record of each day's activities and provides print-out functions for future reference. (*Organic Software®, Digital Marketing™*)

DataStar™

DataStar is an easy-to-learn, versatile and comprehensive data entry program, retrieval and update system for your Osborne. DataStar handles recordkeeping applications from initial form design through updating, addition/deletion, and search/ retrieval of records. DataStar is designed to support speed and accuracy, allowing fast typists to operate at their best rate. The programs comprehensive HELP messages and instructions also provide the assistance the inexperienced user needs. (*MicroPro™*)

Disk Doctor™

This program reclaims damaged diskettes and allows you to recreate accidentally erased files. Disk Doctor helps the Osborne user to restore damaged or faulty diskettes to a usable condition, recovering as much data as it can. As an added benefit, Disk Doctor can also be used to certify new diskettes and eliminate any bad sectors before they can cause problems. (*SuperSoft™*)

Footnote™

Footnote numbers and formats footnote calls and the actual words in WordStar text files. Footnote numbers notes consecutively, and formats the file, placing the notes at the bottom of the appropriate page, or, at the user's option, moving them out of the text to a separate footnote file. (*Pro/Tem Software, Inc.™*)

Milestone™

Milestone is used for planning priority scheduling and tracking of small projects on your Osborne computer. Milestone creates Gant project charts and can be configured to find the critical path of a project. Two kinds of users will find Milestone helpful: project planners who are not yet using computers as planning tools, and planners who are disenchanted with their powerful project planning systems on minis or large frames. (*Organic Software®*)

Enumerator™

Enumerator adds variable line numbering abilities to documents created by WordStar. Enumerator allows you to number by line in any sequential pattern (ideal for attorneys, text writers and BASIC program writers). (*The Orthocode Corporation™*)

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dBASE II is a powerful, easy-to-use data management tool for constructing and manipulating numeric and character information files. A special feature of dBASE II is its own English-style program-building-language. You may SORT, EDIT, or DISPLAY a database directly from the keyboard, or write menus and programs to support your specific applications. (*Ashton-Tate, Inc.™*)

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SuperSort™

Allows the Osborne user to perform sorting, merging, and record-selection functions on data files. SuperSort is compatible with BASIC, Fortran, Cobol and assembler applications programs, and can also be used with mail lists maintained with Mailman™ and WordStar. Sorts up to 32 files into a single output file, automatically using external merge as necessary, depending upon the amount of data and memory available. (*MicroPro™*)

Grammatik™

Grammatik provides the Osborne user with a unique program that analyzes written styles at both the word and the sentence level. This document-checking system checks for two sources of potential problems; style and typographical errors. Style analysis includes checks for specific phrases commonly recognized as being poor or wordy usage, as well as compiling statistics about word and sentence length. Typographical checking detects a number of errors such as: double words, capitalization at the beginning of sentences, and inconsistent and punctuation marks. (*Aspen Software Company™*)

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Mailman™

Mailman creates and manages your mailing list. Formatted screen entry with eight different selecting criteria gives the Osborne user ease of access and entry, along with discrete listing capabilities. In addition, the program automatically sorts data by zip code and name. Mailman is designed to work with WordStar and MailMerge®. (*Standard Microsystems™*)

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BSTAM is a telecommunications program that allows the Osborne user to send and receive any CP/M file with complete error checking. The BSTAM documentation gives the user a comprehensive overview of types of channels, modes of transmission, sending and receiving any CP/M file. A copy of BSTAM is required on both systems involved in the communication. (*Byrom Software™*)

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This is an indexing program that works with WordStar to create an automatic text index or table of contents. Documate/Plus supports up to 8 levels of sub-indexing, and you can choose to index either words or phrases. (*The Orthocode Corporation™*)

Spellguard™

Spellguard is a computer program that helps the user to eliminate spelling and typographical errors in written materials prepared with WordStar. Two dictionaries are supplied with Spellguard: the first consists of 20,000 of the most frequently used words in the English language and the second contains 10,000 words and can be easily expanded to include technical vocabulary and/or foreign languages. (*Sorcim™*)

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Barbara Elman, Editor
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Microcomputer Workshops

Novices, professionals or the simply curious will find topics to advance their microcomputer knowledge by attending a series of workshops to be held in Mountain View, California. Sponsored by the Digital Deli, topics now scheduled include: CP/M, dBASE II, SuperCalc, WordStar, Modems, Data Star and Networking. Fees will generally be \$30 for each 2 hour session, \$45 for each 3 hour session and \$60 for the 4 hour session. Workshops will be held Monday through Thursday evenings from 7 to 10 and Saturdays from 9 to 12 at the Digital Deli training room. For more information contact:

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UOLISP is not just a LISP interpreter, it comes complete with a compiler and an optimizer. The system includes a number of precompiled packages that can be loaded one at a time or in combinations. The system comes with over 100 pages of documentation and retails for \$150.00.

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Space Pirates uses the fast, memory-mapped character graphics of the Osborne 1 for exciting arcade-style action. No additional hardware is required for full two dimensional control of direction, acceleration and laser cannon.

Space Pirates is available from many Computerland dealers as well as other authorized Osborne dealers, or from The Software Toolworks,

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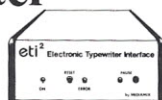
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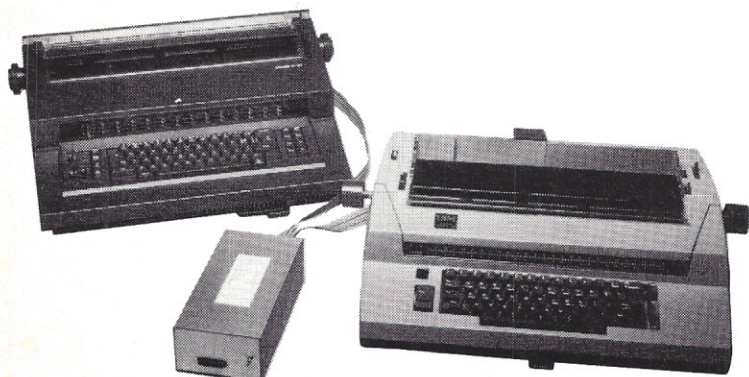
Osborne User Group and was designed to pass on helpful information on the Osborne 1 to other users. OS/TECH brings subscribers information about the Osborne that the manual may not cover clearly. For the experienced user there is hard-to-get information from more sophisticated sources. Information is included about new products, software (both retail and private domain) and books. OS/TECH is published six times a year. Individual copies are

New Product information is derived from press releases sent to The Portable Companion by the producing companies. Statements of fact or opinions expressed in the New Product announcements that appear in this magazine are those of the producing company and have not been checked for accuracy by Osborne Computer Corporation. Before purchasing any of the products listed in this section, you are advised to check the validity of all claims made for the product.



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The word processing / typeset connection

Barbara Elman

You have just completed "The Great American Novel" and a dozen bookstores are lined up with orders. Your appearances on Merv and Johnny begin next month, but text from your dot matrix printer looks like a *Reader's Digest* form letter! Typesetting is impossible—too costly, too time consuming, too error-prone—or is it?

Now that micros are competing with fancy office word processors to edit your prose, a new kid has appeared on the block and is anxious to play: the WP/Typeset Interface. Offering increased legibility, compaction of text per page, and a more "professional" image than dot or typewriter print, typesetting is now an affordable option for any Osborne user. Up to 50% of the effort to convert text to phototype and 50% of the cost can be cut by working with an experienced computerized typographer and planning ahead. Here's how:

The primary reason for converting text to camera-ready type is to take advantage of the ability to change leading (spacing between lines) by fractions, change type size/width, and change line length/width—all to get more words on a page with a readable, professional look. Until recently it was cheaper for the typographer to re-key every word and space; now it's easier for you to capture the text on your computer and pass it on to the typesetter in one of four ways. (NOTE: not all typog-

raphers can interface with word processors; consult those in your area to find out which methods they can work with and how best to use them. If none of them can interface with your Osborne, there are firms who specialize in long-distance work noted at the end of this article.)

These methods are: direct media-to-media interface, telecommunication via phone lines or database interception, direct compatibility, and optical character recognition devices. More computerese! How do these work?

Direct media-to-media interface works by translating your text direct from diskette to the format/storage method readable by your typesetter's computer. This can be done at the typographer's shop or sent to a third-party conversion service. Just as an Apple diskette still can't be read by your Osborne, good ol' Ozzie and your typographer's computer don't speak the same language. But with devices like the *Shafstall Media Comm*, a multi-disk reader, your diskette can be copied to your typographer's format in a few minutes. Most function and text format coding should translate along with the text. This is an extra service beyond outputting phototype, so ask the rates in advance (usually calculated in characters/cents). Once converted, your text now resides on both your diskette and the typographer's for future revisions.



Telecommunications is the simplest and usually most cost-effective interface today. It does require extra devices on both sides of the phone—a modem to translate your text into phone-transmittable beeps and convert them back to computerese at your typographer's end of the line, as well as communications software. A 300 baud rate (sending 30 cps) is enough for short documents like newsletters, but 1200 baud is recommended for longer works, cutting transmission time/costs.

Make sure you provide hard copy to your typesetter for comparison, as "noisy" phone lines often interfere with clean transmission. Budget some time and money for this double-check as well. If your typographer is not local and you subscribe to *The SOURCE* or CompuServe, he may prefer to receive data via the database's clean local access lines and save on long-distance charges.

Direct compatibility (where your

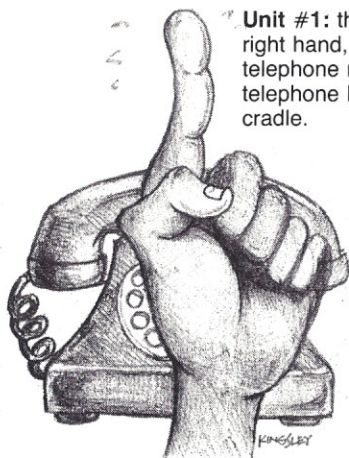
typographer's computer reads your Osborne diskette) is the least common interface today and not yet possible from Osborne format. You may, however, be able to carry your portable Ozzie to your typographer's studio, plug it into his system directly via RS232 or IEEE-488 connections (probably through a multi-port connection device many typesetters already use), and PIP over text via CP/M. This is a good way to insure clean interface and also fun to watch—if your typographer knows his way around computers and has equipment to handle this delicate marriage.

Optical character recognition is an ideal concept in theory, but less than perfect in use. Exceptionally clean, perfectly formatted text scans best, and typesetters find it difficult to get this high-quality copy from most customers. In essence, an OCR device takes hard copy, reads it via a scanning "window," translates text and formatting to electronic signals, and writes it to disk for the typesetter. Typeset codes can be included with text as well. (You can also write typewritten text to disk for your word processor this way.)

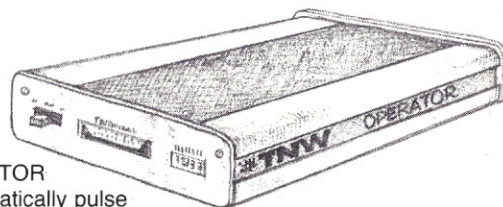
A special font (OCR-A or OCR-B) may be required, but these are available in Selectric elements and word processing daisywheels. Some OCRs can read Selectric typefaces (Courier, Prestige Elite, etc.) and one magic machine reads almost any words on paper, even handwriting! The *Kurzweil Omnifont Reader* can be "taught" to even read text that has previously been typeset (meaning you can convert copy that was typeset before you got your word processor to disk for re-editing/updating now!). Setup and learning time is required for each typeface, so again, check costs before you budget.

With any of these methods, you will save operator intervention by having the typographer design a *coding* system which you input while composing or editing. This is a symbol/mnemonic combination to instruct the typeset computer when to change typestyles or sizes, whether to italicize or boldface, when to change paragraphs and how much leading to insert between lines, etc. After a discussion of your needs, your interface-experienced typographer can set this up quickly from a sample of your text. Once you are proficient

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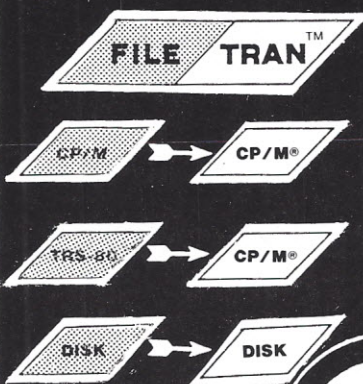


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the Processed Word

at coding, any set-up charges will be offset by the savings you gain by interfacing to typeset instead of rekeying.

Now for the bad news: despite the technological advances and cost/effort advantages, interfacing is not always the best way to typeset your copy. There are some limiting factors and occasions where the old-fashioned route is still the best approach. Clean, straight text with simple and or repetitive format changes,, such as magazine or book copy, makes for the most successful interface. Directories where a basic format is repeated uniformly despite format/type changes within paragraphs are also good candidates. However, it is faster and cheaper to set charts, statistical and columnar copy directly.

Some subtle incompatibilities of software can also make interfacing difficult. Methods of storing media on diskette differ from system to system (sectors, single/double density, etc.), so in some cases it is better to telecommunicate text rather than convert a diskette to typeset.

A more common stumbling block is the translation of internal programming codes between different operating languages. This still occurs among micros (Apple vs. TRS-80, CP/M vs. IBM-PC), so it is easy to understand how this affects typesetting conversion. Sometimes *only* the text transmits cleanly, with formatting instructions (tabs, returns, indents, centers) requiring manual insertion by the typographer.

Translating normal word processing operations into standard typeset forms also takes some preplanning. Typeset uses italics instead of underlining, a single "space" between sentences instead of two, an "em" space at the beginning of paragraphs instead of a tab. Most typeset computers strip out or change these "standard" functions from word processing mode, but inputting with this in mind saves effort later.

Again, discuss the differences between typing and typesetting with your now-friendly typographer.

In budgeting your project consider that typesetters all have base prices for interfacing operations, code set-up and final phototype layout, but your final bill may be higher than the estimate due to the individual needs of the job. Find out in front how to minimize costs and delays so that the bottom line doesn't grow beyond your means due to poor planning and last-minute changes.

To find out about typesetting my newsletter for computerized writers, *W.P. News: A Writer's POV on Word Processing*, I spoke at length with Jim Jones, owner of I/OCR Typesetting in Glendale, CA., and a pioneer in the WP/Typeset Interface. Approaching typography from a data processing background, Jim immediately saw the potential of microcomputers for typeset input. We estimated the cost of typesetting an issue of *W.P. News* by interfacing my Osborne 1 with Jim's equipment. Then we tested direct transmission from Ozzie to his Vector Graphic Word Processing system, whose diskettes are compatible with his AM Comp/Edit typesetter, using the RS232 and CP/M compatibility of Ozzie and Vector Graphic. I was hooked!

Jim set up simple codes for type changes based on WPN Issue #2, and we decided that if I batched headlines, quotes and other non-standard text, and Jim's operator input the masthead and table of contents, the cost would be 50% less than keyboarding it all at I/OCR—an impressive savings! This included an hour of operator input/proof as well. Turnaround time was projected at 48 hours, and I would do the layout myself although, like many typographers, Jim could give me laid-out camera-ready copy.

Jim also recommended other Osborne users talk with potential typographers to insure compatibility

before getting started. Any typographer who really want to reach word processing users will invest some "free" time building future business. His strongest advice, however, was to tell any typesetter who claims he can interface easily: "SHOW ME!" Also, get references of other customers they have worked with to find out how it went from the word processing end of the line.

The number of interfaceable typographers is growing quickly, although many typographers still use equipment unable to connect with yours without disk conversion. *TYPEWORLD* (15 Oakridge Circle, Wilmington MA 01887), a newspaper for the word processing typeset and graphics industry, supplemented their March 26, 1982 issue with a *Directory of Communicating Typesetters*. Priced at \$5, this supplement lists a wide variety of typesetters and their equipment. The 1983 annual directory should be available next spring.

Other resources I have heard of but not talked with include: *Conversion Services*—Datascan, Santa Monica, CA; *Altext*, Boston MA. *Interfacing Typographer*—Techni-Process/Computer Press, Los Altos, CA; Dream Electronics, Corvallis OR; Johnson & Smith Typesetting, Glendale, CA; Phoenix Studio, Philadelphia PA; Arts & Letters, Brookline MA; DynaType, Glendale CA; Grossman Graphics, Philadelphia PA; Intergraphics, Alexandria VA; and TypeShare, Downey CA. They each offer long-distance service via disk conversion or TC, and some allow payment by credit card. Call or write for brochures and rates.

Dirck Holscher of Electronic Publishers Technology Group (PO Box 3568, 1200 29th St. NW, Washington DC, 20007) also offers interfacing to typeset (as well as OCR) and has been educating typesetters via excellent national seminars (write for schedule). He has also written a useful monograph on the subject for the Na-

tional Composition Association; contact him for details.

So although computer printers are becoming more affordable and offering better quality output than before, there are still occasions when typesetting is what you need. Knowing your Osborne can become a typesetting terminal and even travel to the typographer's studio in a pinch makes this previously painful task as simple as word processing itself.

Barbara Elman publishes a bi-monthly newsletter for computerized writers of all types, which includes a column for Osborne users (W.P. News, 1765 N. Highland #306, Hollywood, CA 90028; \$2/sample; \$24/year). She also consults and speaks to writers nationwide on computerizing the creative process. □

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reviews

Starting with this issue of *The Portable Companion*, we'll be presenting user reactions to software, hardware, and peripheral products for the Osborne 1 computer.

Osborne Computer Corporation cannot endorse any product. To do so would be a violation of the philosophy with which this magazine was started. Therefore, let us state the rules and caveats by which this section of the magazine will operate.

1) The reviews are the opinion of the author only. If you disagree with an opinion, send us your own—we will publish, within reason, multiple reviews of the same product.

2) OCC edits the reviews only for grammar, spelling and libel. In the case of a negative review, we offer the producing company an equal number of words for response. We cannot be responsible for misrepresentation by either party. As always, we ask the reader to verify information printed here before using it as an integral part of your purchase decision.

3) Anything goes. Pick any style you want to write your review—poetry, prose, parody—you name it. Be creative, but remember the intent of your mission in writing a review: to tell others what you think of a product and why.

Enough said, on with the reviews.

Trantor 10-megabyte Hard Disk Drive: When I was first told that you could hook a hard disk drive up to the Osborne, I responded with a flat "you're nuts." As usual, I was proven wrong.

I've had the first Trantor hard disk drive for about nine months now. Yes, friends, I've been basking in megabytes (10) of disk storage space. Indeed, I've never managed to fill the space. For me, the Trantor has proven to be a black hole of bytes.

First the facts: The Trantor comes complete with software and cable to hook to the Osborne. Simply follow a few instructions in the supplied manual and you're going. I've con-

figured my hard disk drive to be two logical drives, A and B, with the floppies becoming Drives C and D.

Trantor Systems includes a file archive utility that allows you to backup the files on the hard disk drive onto floppies. Currently, I have 22 floppies used in the backup process, which takes about 35 minutes.

Next, the advantages: The Trantor gives you two basic advantages, speed and space. The drive is not lightning quick—I've seen faster—but it is fast. I bounce around from program to program with nary a wait. The space you already know about.

Finally, some comments: I've crashed the system three times, erasing all the files off the drive! All three times were my fault—I didn't follow instructions or I was stupid and attempted brute force changes on the drive without knowing what I was doing. Since I back up my drive only once a week, I lost some files each time (plus the time in resurrecting everything), but I have no one to blame except myself. If I had been more careful in backing things up or had not "played around" with the drive so much, I wouldn't have had those problems.

I've also used a Corvus hard disk system at work. The Trantor is a little faster by my benchmarks; the Corvus supports multiple users. Both make about the same amount of noise, although the Corvus seems to throw off more heat. The Trantor is less expensive, with \$2995 the price for a complete 5-megabyte drive, \$3495 the price for the 10-megabyte system I own.

Having a hard disk drive spoils you. I like the way the Trantor has spoiled me.

Thom Hogan

Osboard 1: Although I am a very satisfied Osborne 1 owner, I came very close to not buying my machine. While the features, portability, and price appealed to me, the lack of high-resolution graphics capabilities almost steered me towards one of the

competing machines, such as Apple or IBM. Ultimately, I bought an Osborne in spite of this handicap, largely because I didn't have the \$3000 that would have been necessary to match the Osborne's features in a different machine.

One night at an Osborne Santa Barbara Users Group (OSBUG) meeting, Dave Grenowitsky, a software designer, demonstrated the *Osboard 1* program that he had written. I was ecstatic. My little "business" machine, which I had thought so limited in terms of visual displays, was actually capable of generating impressive graphic patterns! All that was needed was the proper tool for putting those graphics characters on the screen, and *Osboard* was obviously an effective tool. I bought a copy immediately.

Osboard 1 is actually a package of several programs, each with a different function. With the package, one can access both graphic and alphanumeric characters; create, edit, and save screen images; merge a screen image with other programs; and print the images on one of several popular dot matrix printers. It's very easy to use—on-screen instructions are available for each of the programs—and the user guide is one of the clearest and most thorough I've ever seen. The price is right, too (about \$50).

OSBOARD.COM, the cornerstone of the software package, contains three basic options: create or edit a screen image; read a picture from disk; and save a picture to disk. One creates an image by moving the cursor around the screen using the numeric key pad and pressing appropriate keys at desired screen locations. The user can place alphanumeric characters or one of the 32 Osborne graphics characters at any desired location. In addition, you can select either bright or dim intensity, with or without underlining. Saving a completed image is very easy. You merely return to the menu, press the

appropriate menu selection and answer the "file name?" prompt.

Osboard disk images are stored as data pairs, with two data values for each screen position. The first data value gives the ASCII value for the character, while the second represents the intensity (bright or dim). Using a second *Osboard* program, CONVERT.COM, a screen image can be converted to data files for use in either MBASIC, CBASIC, or assembly language programs. In this way a diagram, chart, or logo can be included in any user-written program, and created in a fraction of the time that would otherwise be required.

Finally, for those who like hard copy images and own one of the popular dot-matrix printers (Epson,

IDS, and NEC are supported at this time), the program MXPRINT.COM can be used to print the screen images. The printouts are faithful reproductions of the screen, except that white and black areas are reversed. This was done intentionally to save printer ribbons; rather than darkening all background areas and leaving the drawn image white, only the image itself is printed (gray areas on the screen are printed as gray, however).

Osboard 1, by allowing easy access to the Osborne's graphics characters, greatly enhances the usefulness and versatility of the machine. Any Osborne user interested in exploring the computer's graphics potential should seriously consider this fine program.

George Taylor

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Describes easy-to-use software for business applications: like our low-cost SPELL program that instantly converts your word processor into a spelling error locator. (No more embarrassing mistakes in letters and reports!)

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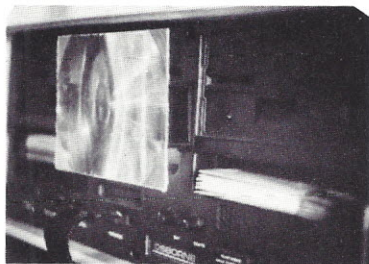


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AS AN OSBORNE OWNER,
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Well, your tiny screen just got bigger. About 50% bigger, actually. COMSOL, the computer solutions company, has just introduced a screen enlarger for your Osborne Personal Computer.

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reviews

(George Taylor is a microcomputer consultant from Santa Barbara, California.)

(Osboard 1 will soon be available to all Osborne owners through the OCC approved software program.)

Superfile: Over a period of many years as seller and supervisor of sellers, I have come to believe that the greatest weakness in marketing systems is giving the salesperson the responsibility of deciding, "What do I do next?" The answer all too often is, "Go to the movies, ball game, park—ANYTHING BUT FACE THOSE COLD CALLS."

Have you ever driven by a big-city park on a nice summer day and noticed all the cars parked there, with one occupant each? Betcha your next bonus most of said occupants are supposed to be out selling something! And that's where the Osborne and SUPERFILE can help.

I spent 1963 to 1977 running a Chicago-based manufacturing company. Our most persistent problem was kicking the salespeople in the tail, encouraging them to keep making that next call. We tried all the usual tactics: big reports, little reports, bonuses, contests, commission increases, commission decreases.

We sold the company shortly after moving to Boulder, Colorado. After a few false re-starts, I fell into the salesman's dream. What I do is offer merchants MasterCard and Visa processing, cheaper and better than they're getting it now.

However, now that I'm the sales manager AND the salesman, I am concerned with my own efficiency. I found myself spending selling time in the computer stores (I did sign some of them up on our bank card program.), pleading with them, "Don't you have a program that answers, 'What do I...?'"

Finally I found it!—SUPERFILE.

Unlike other data base management systems, SUPERFILE lets me enter my information in the format

and length I want—some for some customers, more for others, less for still others. Also, it doesn't cost a bundle, only \$195. As you may have discerned by now, I don't part with money easily. SUPERFILE is produced by FYI, INC. of Austin, Texas, and is available at most major computer stores.

Perhaps most important, and unlike most of the other software companies, FYI, INC. offers a full refund on the fully operational program for 30 days after purchase. That's my kind of deal—"Put it on my Visa." Here's how I use SUPERFILE:

I enter the name, company, address, and phone number of everyone I have contacted who might be a prospect for our service in the future, along with any relevant information about him. Using SUPERFILE's "key words", I index the contact by his name, his company's name, his location, his type of business, and most important, by the date I want to contact him next. I update this information after each contact, and make new entries as appropriate.

SUPERFILE lets me use 250 key words to cross-index each entry in my data base. A single data base can have up to 3000 key words—if I can think of that many. On my single density Osborne 1, I can store about 2,500 entries in a single data base, and as many data bases as I need. Each entry can be many pages long. SUPERFILE allows me to keep the data for a single data base on as many as 255 separate diskettes, so the capacity is tremendous!

If today is a "phone" day, I enter the date, which brings today's calls onto the screen. Using other key words, I can bring up other prospects who may not have originally been scheduled to be contacted today. As I call them, I make notes on a blank sheet of paper for later entry into the file.

If today is a "car" day, I print out my list of calls, leaving room for comments and cold calls. When I get

home, I update from my notes and file my call sheets by date.

The main advantage to using *SUPERFILE* with my Osborne is that I now know "What do I...!" *I can find the information that helps me make sales.* With this system I am better prepared for each contact. More time is spent with the prospect, and less in unproductive tasks. I no longer have to worry about lost notes and missed contacts, and I know exactly what I need to be doing during the day.

Jay Hearst.

KayPro

This is Osborne's big competition. Hardware has a lot going for it. The screen is a green, 80 column 9" monitor, a real selectric layout

keyboard, double density drives, coiled modular-telephone-type keyboard connector wire. Z80 with CP/M and printer connections are at the rear. \$1790.00.

Included software is the *Select* word processor with a spelling checker package and self teaching program; some kind of spreadsheet; CP/M and *S-BASIC*.

Things begin to break down.

I hate the ugly metal case. The keyboard housing is metal too, and if you like to rest your hands on the keyboard like I do, you find that it draws a lot of heat out of your hands, making your fingers rather stiff.

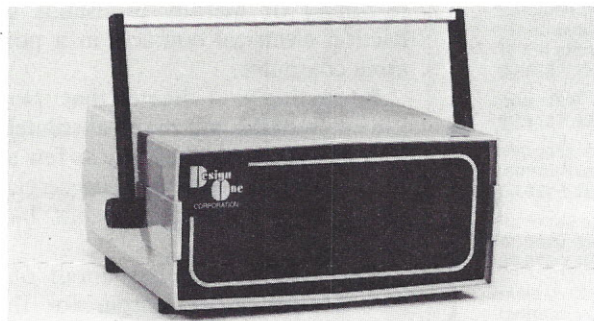
Select.

Select is... something you must experience to truly hate. Although it is very easy to learn it is clumsy to

use. For example: if while entering text you discover that you need to change a character in a word in the last sentence; you have to exit the insert (text entry) mode, save the text you are entering, go to edit mode and correct the word you want to fix, exit the edit mode, save the correction; re-enter the insert mode and continue with your text entry. It is a great deal less logical than doing a single character insertion in *WordStar*.

Select is so bad Non-Linear Systems is dropping the system in favor of a total newcomer: *Perfect Writer*. The "Perfect" series includes a spelling checker and a spreadsheet which seems a bit ambitious to me. I must confess to a great deal of doubt over any software product from a totally new source that calls itself "Perfect."

Turn your Osborne into a **SUPERCOMPUTER** with the **Design One Hard Disk Drive**



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reviews

I have yet to see any reviews on this mysterious software... many months after it has been announced... and local dealers to whom I have spoken have yet to see it shipped.

WordStar on the other hand is THE most popular micro computer word processor, and it has been out a number of years. It has long ago gone through the diaper stage and a couple of major revisions. That should be considered quite significant. I have used better systems on Mini-computers and dedicated word Processors, but not on Micro's.

I heard that the Z80 on the KayPro runs at 2 Mhz where the Ozzy runs at 4 Mhz. I don't know if that's true or not, but the screen acts a lot slower than the Ozzy.

The KayPro screen is larger than the Ozzy and it's green too, which is nice. The characters however are poorly formed and downright hard to read. Frankly I didn't fully appreciate the clarity of the Osborne's screen until I saw the KayPro.

The machines are still being "hand built" according to one dealer, which he implied was an advantage. I don't think so, because if repairs are ever needed, a "hand built" unit could be a bear to fix if the rest of the unit population is well built by mass production. ALL of the chips on the KayPro's master board are in sockets, making me wonder about the reliability of literally thousands of friction electrical contacts in a portable computer.

Interestingly, I heard that Non Linear Systems will make absolutely anyone a dealer if they buy as few as five units. No qualifying, no service department requirements. Just buy five units.

The KayPro also has about one half of the profit margin for the dealers that the OZZY offers to keep the retail price competitive with Osborne. That leads to under-enthusiastic dealers, and more likely than not, less service after the sale.

Scott Rainey, OSBUG

Were you "Bugs" Eugene

Charles E. Moller

Eugene-would you feel a
Different dynamic—
In my now?
Would you freshen
In micro baudian synchronization
Re-calculate-replicate?

Or is a pervading
Image, true or false,
An hard wiring shadow
Image of the greater
Reality in the mind of
The Dreaming God?

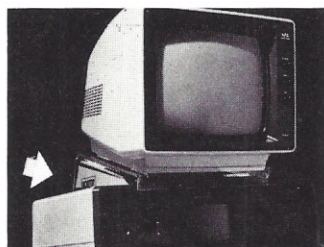
Was yours a RAM
A transient program
Under the
CREATE MODE of
Your Father's
Drive and Your
Mother's KILL or ERA
COMMAND Or Your
Brother's DELETE or ERASE?

Or was yours
Some more complex combination
Of Environmental GLITCHES
Some subtitle
Defect in your BIOS

That Made your vision
And You
EXECUTE in

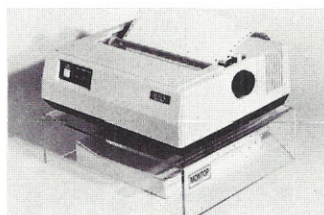
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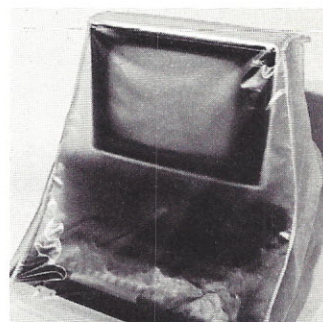
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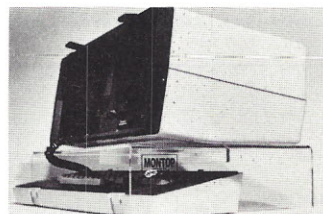
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Expiration Date _____

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Send to:

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THE RESEARCH ASSOCIATES introduces a video system as an add-on to the Osborne 1.* The system will provide the versatility of an 80 or 100 column video screen format on an external monitor without loss of Osborne 1's video capabilities or speed.

- ★ The **TRA** video system enhances Osborne 1's video capabilities by providing:

80 character by 24 line window into a 128 character by 32 line video format

100 character by 24 line window into a 128 character by 32 line video format

soft scrolling

reverse video and blinking of the video display

composite and TTL video monitor outputs

- ★ Connection is easily made by any Osborne 1 user. Simply plug into the IEEE port and into your external monitor.

- ★ Parallel printer connection is not forfeited. Plug your printer into the TRA parallel port and begin normal printer operation.

- ★ The operating system set up procedure is easily accomplished by a one-time, automatic disk configuration process. The driver software is supplied by THE RESEARCH ASSOCIATES.

★ Information, specifications and price are available by writing to:

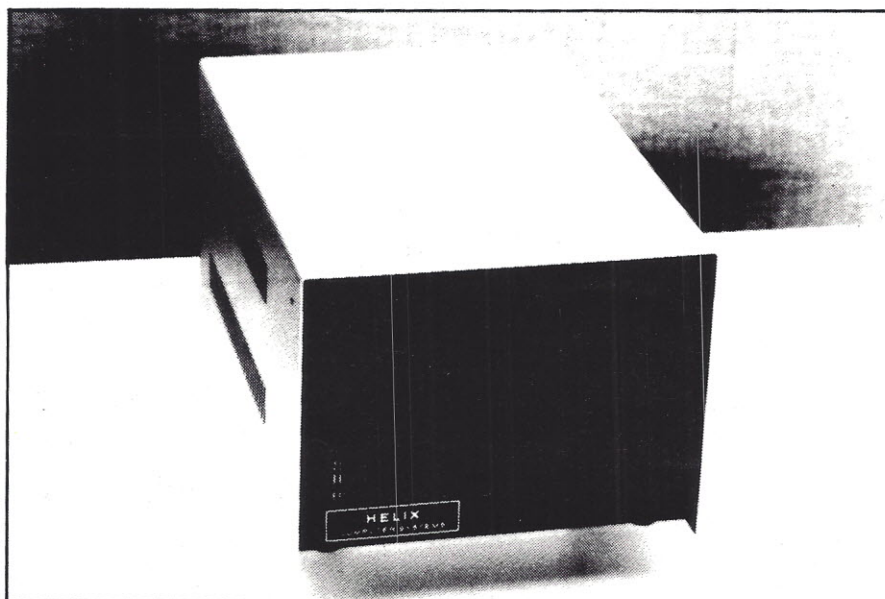
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CalcAids

Illustrative SuperCalc

J. R. Garfield

In the early 1960s computers were amazing even though a 16K machine was as big as a large refrigerator. If computing machinery was amazing then, today computers are truly incredible. Each of us can have a completely portable model many times more powerful and reliable than these early devices.

The new economy of computers has opened the door to unprecedented opportunity in finding new ways to make computers useful. The electronic spreadsheet programs that began as a bright idea in a Harvard business classroom have created so much demand that they have driven down the price of computers, making them truly affordable. One of the most advanced and highly-rated versions of this type of innovative spreadsheet program is *SuperCalc*.

The purpose of this CalcAid is to help learn and perhaps discover some interesting aspects of *SuperCalc*.

Since examples are the easiest way to illustrate the various *SuperCalc* features, let's generate a useful one. You are a sales manager for Flinkies, Inc., and would like a weekly ranking of your sales staff. Can *SuperCalc* help with this ranking? Yes! and in a "graphic" manner as you will soon see.

Start by entering the information shown in Figure 1 on a new *SuperCalc* form. One program convenience is the ease with which headings may be entered. Enter the SALES REPORT SUMMARY heading into cell A1. (Note how the text automatically spilled over into the empty cells at the right.) The / (F) or mat, (C)olumn, B <CR>, 15 <CR>

1	A	B	C	D	E
1	SALES REPORT SUMMARY				
2	-----				
3	Salesman	Flinkies sales(value and bar graph)			
4	-----				
5		3 Weeks Before	60		C5/3
6	Adams	2 Weeks Before	63		C6/3
7		Week Before	55		C7/3
8		Last Week	83		C8/3

Figure 1

ABACUS

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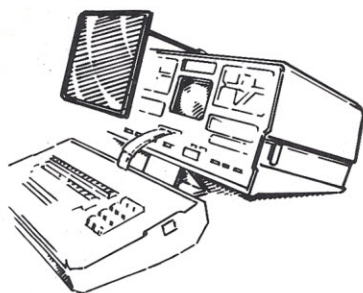
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Compared with other magnifiers.



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CalcAids

command should next be used to set columns B, C, D and E to new widths (15, 4, 1 and 30 respectively). You will note when column D is set to a width of one (1), the top column heading (D) is lost and the cursor disappears when in this column, but do not worry the (:) characters can still be entered normally.

SuperCalc has a useful graphics capability, which is requested through the asterisk (*) option of the */Format* instruction. This special format option plots a number of asterisks (*) equal to the value of the number in the cell. The maximum value in column C is 83 and since this would make an excessively long graph, it was elected to shorten the bar length by dividing the number of Flinkies sold by three (3). Each asterisk will now represent three sales. After entering the C5/3 equation in E5 (you will see the result of the calculation not the equation on the screen) we can use the powerful replicate instruction, */Replicate*, E5<CR>,E6:E8<CR> to generate the other three equations. In entering the carriage return <CR> after the last address, *SuperCalc* will automatically update each address as it is created. Next, to generate the bar graph we simply enter */Format*, (C)olumn, E<CR>*,<CR> and the graph magically appears as shown in Figure 2.

We have created a graph of one

salesperson's activity. Now, with a minimum of typing let's use the (C)opy command to enlarge the chart for six (6) salespeople. It will require three different copy instructions; two each that double the number of salespeople on the graph then a third adding the last two bar sets. These instructions should be entered in order: */Copy*,A5:E9<CR>, A10<CR>, */Copy*, A5:E14<CR>,A14<CR> and */Copy*, A5:E14<CR>, A25<CR>. To calculate the average weekly sales enter *AVERAGE* (C5:C33) in cell C35 and the heading shown in Figure 3 into A35. The average will automatically be calculated with the *AVERAGE* routine skipping any empty cells (such as C24). Next, update the names and sales figures for each salesperson, and make sure all cells are recalculated by entering an explanation mark (!).

Now that you have created a standard *SuperCalc* bar chart as shown in Figure 3, let's try something not so standard. By using some of *SuperCalc*'s other capabilities we will modify our chart to bring it directly to the point. First, delete column D with a */Delete*, (C)olumn, D<CR> instruction then add a new row by entering */Insert*, (R)ow, 5<CR>. You will note all necessary addresses will be updated. Amazing! Set columns D, E, F and G to be 15, 1, 15 and 15 characters wide with the (F)or-

1	A	B	C	E
1	SALES REPORT SUMMARY			
2	-----			
3	Salesman	Flinkies sales(value and bar graph)		
4	-----			
5		3 Weeks Before	60	*****
6	Adams	2 Weeks Before	63	*****
7		Week Before	55	*****
8		Last Week	83	*****

Figure 2


```

1:      A      B      C      E
2:-----
3:Salesman      Flinkies sales(value and bar graph)
4:-----
5:      3 Weeks Before      60: *****
6:Adams      2 Weeks Before      63: *****
7:      Week Before      55: *****
8:      Last Week      83: *****
9:
10:      3 Weeks Before      36: *****
11:Banks      2 Weeks Before      44: *****
12:      Week Before      31: *****
13:      Last Week      30: *****
14:
15:      3 Weeks Before      42: *****
16:Campbell      2 Weeks Before      53: *****
17:      Week Before      48: *****
18:      Last Week      61: *****
19:
20:      3 Weeks Before      43: *****
21:Davis      2 Weeks Before      36: *****
22:      Week Before      30: *****
23:      Last Week      35: *****
24:
25:      3 Weeks Before      43: *****
26:Egbert      2 Weeks Before      75: *****
27:      Week Before      80: *****
28:      Last Week      82: *****
29:
30:      3 Weeks Before      52: *****
31:Ford      2 Weeks Before      76: *****
32:      Week Before      57: *****
33:      Last Week      78: *****
34:
35:Average Weekly Sales =      53.88

```

Figure 3

mat instruction and blank column D from row 6 through row 36 with `/(B)lank,D6:D36<CR>`.

Next enter the characters and equations shown in Figure 4 into row 5 and Columns E, F and G. The equations can easily be input by starting with cell F6 then replicating copies down the column, but be careful. The

two C36 addresses in the equation should *not* be incremented. This can be accomplished by entering `/(R)eplicate,F6<CR>,F7:F34,(A),Y,N,Y,N`; note the difference from the previous replicate instructions. Instead of entering a `<CR>` after the last address input a comma (,) and *SuperCalc* will ask if the ad-



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CalcAids

1	A	11	B	11	C	11	D	11	F	11	G	11	
11	SALES REPORT SUMMARY												
21	-----												
31	Salesman		Flinkies sales(value and bar graph)										
41	-----												
51			Below Average				Above Average						
61	3 Weeks Before		60					IF(C6>C36,(C6-C36)/2,0)				IF(C6<C36,(C36-C6)/2,0)	
71	Adams		2 Weeks Before	63					IF(C7>C36,(C7-C36)/2,0)				IF(C7<C36,(C36-C7)/2,0)
81	Week Before		55					IF(C8>C36,(C8-C36)/2,0)				IF(C8<C36,(C36-C8)/2,0)	
91	Last Week		83					IF(C9>C36,(C9-C36)/2,0)				IF(C9<C36,(C36-C9)/2,0)	

Figure 4

dress needs adjusting. You have a choice of answering no (N), ask (A) or value (V). You should choose the (A) option after which *SuperCalc* will ask if the equation addresses should

be updated. If you answer Y, N, Y and N, as shown, then the equation will be correctly replicated. Repeat the same procedure for the column D equations but entering Y, N, N and Y

in answer to the (A)sk questions. Next, blank rows 10, 15, 20, 25 and 30, and format columns F and G to the asterisk (*) format.

The equations in column F calcu-

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late zeros if the number of sales is less than average; otherwise, the positive difference between the weekly sales and the average will result. In column G the equations do the opposite; only less than average sales produce positive non-zero values. You will note a scale factor of two was used in-

stead of the earlier three values.

Three final steps remain and you will have created the comparative chart shown in Figure 5. First, the number of asterisks shown in the cells of column G should next be entered as text strings "***...*<CR>" into the same row of column D. Second, a

SALES REPORT SUMMARY				
Salesman	Flinkies sales(value and bar graph)			
		Below Average	Above Average	
Adams	3 Weeks Before	60	***	
	2 Weeks Before	63	****	
	Week Before	55		
	Last Week	83	*****	
Banks	3 Weeks Before	36	*****	
	2 Weeks Before	44	****	
	Week Before	31	*****	
	Last Week	30	*****	
Campbell	3 Weeks Before	42	****	
	2 Weeks Before	53		
	Week Before	48	**	
	Last Week	61	***	
Davis	3 Weeks Before	43	****	
	2 Weeks Before	36	*****	
	Week Before	30	*****	
	Last Week	35	*****	
Egbert	3 Weeks Before	43	****	
	2 Weeks Before	75	*****	
	Week Before	80	*****	
	Last Week	82	*****	
Ford	3 Weeks Before	52		
	2 Weeks Before	76	*****	
	Week Before	57	*	
	Last Week	78	*****	
Average Weekly Sales =		53.88	Below Average	Above Average

Figure 5



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CalcAids

/(F)ormat,(E)ntry, D6:D35<CR>, TR<CR> instruction should be entered. The text right (TR) is used to slide the asterisk strings you entered to the right making them reflect the less than average sales performance results. A neat feature which could be added to SuperCalc would be to allow the TR format instructions to work on an asterisk formatted field. Finally, the /(G)lobal,(B)order command can be used to remove the address characters around the edge, making your sales performance chart more attractive. Print your chart only from A1 to F36. Since the bars in column G were created as a convenience in calculating the number of asterisks to be entered manually into column D, this last column should not be printed in the final graph.

One final note, to calculate the sales bar charts correctly the average in C36 must be evaluated before the equations in Columns F and G. To force a column by column calculation sequence the /(G)lobal,(R)ow command must be executed once during the worksheets creation.

(J. R. Garfield is presently an engineer with the aerospace industry. He is also involved in a consulting capacity with a wide variety of business, computer, and engineering projects.)

The Portable Companion is always looking for articles, tips and other editorial material for use in the publication. Editorial material in this magazine is compensated for at a minimum of \$25 per printed page.

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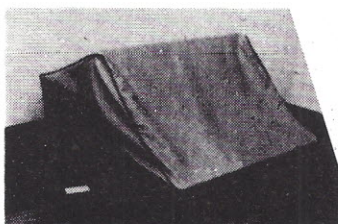


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dBASICS

Graceful editing with dBASE II

David Gute

A graceful editing routine allows an operator to access a specific record in a given data base, make the necessary changes with a minimum knowledge of dBASE II, and be able to exit from the editing routine when desired.

With minor alterations you can convert the routine from my column in the last issue of *The Portable Companion* into a separate data entry

routine called ENTRY.COM as shown in *Figure 1*.

Let's assume we have a data base (named TRAVEL) we want to edit with a numeric field called EMP:NO. This field stands for the employee number and we can identify any employee by his or her employee number rather than their record number.

In order to access a specific record

quickly, the person writing the routine will become acquainted with the FIND command. When a file is indexed on a field, it will put the file in ascending order starting with the lowest value in the specified field and ranging to the highest value. When a file is indexed a new file is created by dBASE II with an .NDX extension. Index the data base file by using the

Continued on page 94

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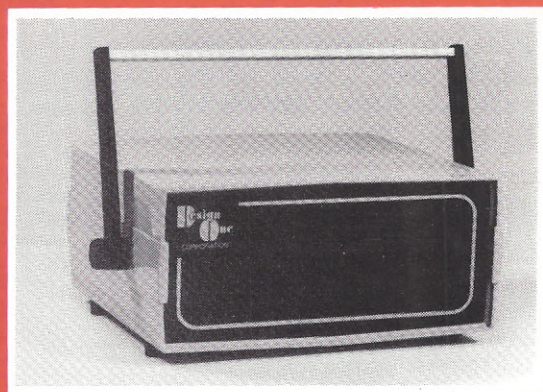
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```
*DATA ENTRY PROGRAM
SET ESCAPE ON
*
STORE 'N' TO ozzie
DO WHILE ! (ozzie)='N'
  ERASE
  ?
  ??          1 - ENTER INFORMATION'
  ??          Q - QUIT GRACEFULLY'
  ?
  WAIT TO ozzie
  ERASE
  IF ! (ozzie) = 'Q'
    RETURN
  ELSE
    IF ! (ozzie) = '1'
      APPEND
    ELSE
      LOOP
    ENDIF
  ENDIF
ENDDO
RETURN
```

Figure 1

```
*MAIN.CMD
*MAIN MENU DRIVER
SET TALK OFF
SET ESCAPE ON
*
USE B:TRAVEL INDEX B:TEMP
*
STORE 'N' TO proceed
DO WHILE ! (proceed)='N'
  ERASE
  ?
  ?
  ??          MAIN MENU'
  ??          ====='
  ?
  ??          1 - ENTER INFORMATION'
  ??          2 - EDIT INFORMATION'
  ??          Q - QUIT'
  ?
  ?
  ?? Please enter your selection'
  ?
  WAIT TO action
  DO CASE
    CASE !(action)='1'
      DO ENTRY
    CASE !(action)='2'
      DO DBEDIT
    CASE !(action)='Q'
      QUIT
    OTHERWISE
      ?'***INVALID DATA ENTRY, TRY AGAIN***'
  ENDCASE
ENDDO
RETURN
```

Figure 2

**ACCOUNTING
DATA BASE
MANAGEMENT
ENTERTAINMENT
LANGUAGES
MAILING LIST
MANUFACTURING/
RETAIL SYSTEMS
MEDICAL/DENTAL
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dBASICS

following commands:

**USE B:TRAVEL
INDEX ON EMP:NO TO B:TEMP**

These commands are only used once. After the indexed file (TEMP) has been created, the main menu will automatically update any records that are added or edited.

Set up a main menu driver (Figure 2) where selection 1 says ENTER INFORMATION, selection 2 says EDIT INFORMATION, and selection Q says QUIT GRACEFULLY. This routine is simple—it should not require a great deal of explanation. Create it by using the non-document mode in WordStar and call it MAIN.CMD. (Command files should be stored on the dBASE II diskette in Drive A while database

files are called up from the B drive.)

Now that you have a main menu it's time to start on the edit routine.

DBEDIT.CMD Instructions

1—This stores characters in memory variables called ADD, PROCEED and START. Decisions will be based on what is stored at these variables later in the program.

2—'Y' is stored in memory variable START. A loop has begun and all instructions between the DO WHILE and the ENDDO will be executed over and over until the program changes the value of START.

3—This instruction will wait until the operator enters an employee ID

number and a carriage return.

4—If a blank is inserted by the operator, this routine will loop back to the beginning of the EDIT routine, forcing the operator to enter something other than blanks.

5—The &ID is a MACRO instruction. It takes the value of the memory variable and converts it to a character string. Along with the find command, it will search for an ID number that matches.

6—This routine checks to see if there is a record with such an ID number.

7—Stores the record number located by the find command to a memory variable called NUMBER.

8—Using the macro instruction, this will edit the record number that was stored in NUMBER.

9—Releases all values stored in any memory variables. Prevents confusion if another routine was called using the same memory variables.

10—RETURN back to the MAIN MENU.

Using MAIN.CMD

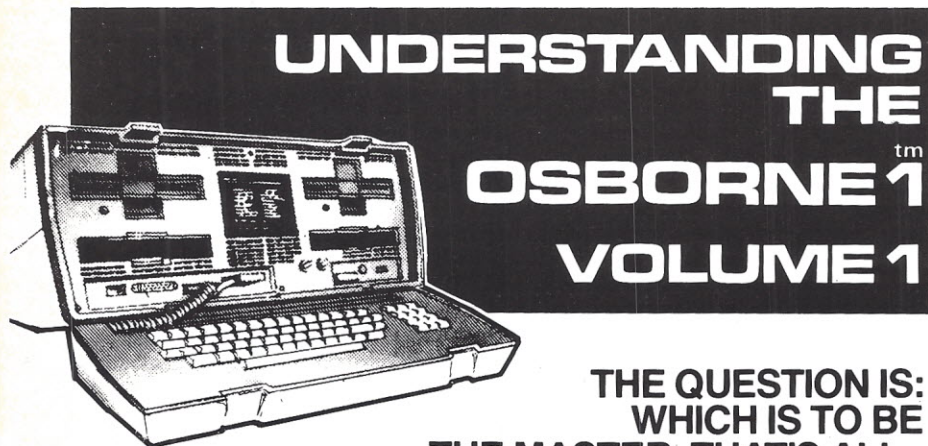
Very simply issue one of the following commands:

A>DBASE MAIN <cr>
or
.DO MAIN <cr>

MAIN.CMD, ENTRY.CMD, and DBEBIT. files should be located on Drive A. TRAVEL.DBF and TEMP.NDX are located on Drive B.

You have now programmed two subroutines and one main menu driver...and it really has been quite simple. Hopefully, you also picked up a few more commands and had the opportunity to become familiar with their operation.

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```

*DBEDIT.CMD
*EDIT ROUTINE FOR EXPENSE REPORT
*
STORE 'E' TO ADD
STORE 'N' TO PROCEED }
STORE 'Y' TO START }
DO WHILE !(START)='Y'
  ERASE
  ?
  ?? EDIT ROUTINE FOR EXPENSE REPORT'
  ?
  ??CNTRL-C WRITES RECORD TO DISK, MOVES TO NEXT RECORD'
  ??CNTRL-R WRITES RECORD, BACKS TO PREVIOUS RECORD'
  ??CNTRL-U TOGGLES DELETION MARK ON AND OFF'
  ??CNTRL-W SAVES ALL CHANGES AND RETURNS TO THE MENU'
  ??CNTRL-Q ABORTS ALL CHANGES MADE, RETURNS TO MENU'
  ?
  ??*****
  ?
  ?
  ACCEPT 'ENTER EMPLOYEE NUMBER TO LOOK UP' TO ID
  ERASE
  IF ID=' '
    LOOP
  ENDIF
  FIND &ID
  IF #=0
    ERASE
    ?
    ?
    ?'NO SUCH RECORD EXISTS THE WAY YOU SPECIFIED IT.'
    ?
    ?
    ?'TRY AGAIN, ADD TO FILE, OR QUIT (T/A/Q)?'
    ?
    WAIT TO ADD
    IF !(ADD)='A'
      ERASE
      DO ENTRY
      STORE 'E' TO ADD
    ELSE
      IF !(ADD)='Q'
        ERASE
        RETURN
      ELSE
        ERASE
        LOOP
      ENDIF
    ENDIF
  ELSE
    STORE STR(#,5) TO NUMBER
    EDIT &NUMBER
    RETURN
  ENDIF
ENDDO
RELEASE ALL
RETURN
  
```

Figure 3

Puzzler

Name that instruction set!

INSTRUCTION	MEANING
BAH	Branch and hang
IIB	Ignore interrupt and branch
TDB	Transfer and drop bits
DO	Divide and overflow
DC	Divide and conquer
SRZ	Subtract and reset to zero
PIC	Punch invalid character
SSJ	Select stacker and jam
RAST	Read and shred tape
CMI	Clobber monitor immediately
SRSD	Seek record and scar disk
BST	Backspace and stretch tape
RIRG	Read inter-record gap
UDR	Update and delete record
RS	Random slew
SSB	Scramble status byte
EDR	Execute destructive read
EIOC	Execute invalid op code
EP	Execute programmer
ERM	Erase reserved memory
PBD	Print and break drum
MLR	Move and lose record
CRN	Convert to Roman Numerals
IDPS	Ignore disk protect switch
HCF	Halt and catch fire
FOPC	[Set] false out-of-paper condition
WUPO	Wad up printer output
IEOF	Ignore end of file
DWIT	Do what I'm thinking
PPL	Perform perpetual loop
ZD	Zap directory
DSH	Destroy sector header
DAP	Deselect active peripheral
SMD	Spontaneous memory dump (use only when payroll checks are loaded.)
SFTT	Strip form tractor teeth
HRPR	Hang up and ruin printer ribbon
ACQT	Advance clock to quitting time

—Anonymous

(We found this "spoof" on instruction sets floating around and thought we'd share it with our readers. No. It's not the set to the "Osborne 2.")

And the winner is . . .

After sifting through the many inventive and ambitious answers to the PUZZLERS in the first three issues of *The Portable Companion*, we have finally zeroed in on the big winners (bet you thought we'd never get to it)! So without further ado . . .

WINNERS-Puzzler #2 August/September Issue "Most Elegant Answer"

Verne Y. Kurisu
San Juan Capistrano, CA

Due to the erratic nature of our mail system in getting the magazine to our readers, we decided not to award a subscription to the first correct answer. Instead, all correct answers were thrown in the hat and the winner was:

Andrew Gottlieb
North Seattle Users Group

PRIZE: One year free subscription to *The Portable Companion* for both winners.

Answer:

We chose to print Verne Kurisu's answer as being most

elegant because it was simple, clean, and did not need integer formulas. Positive, negative, or fractional numbers could be used.

```

1: Answer to August/September Puzzle
2:
3: INPUT ANY NUMBER
4: multiply by 5 : B3*5
5: add 5 : B4+5
6: multiply by 2 : B5*2
7: add 2 = RESULT : B6+2
8:
9:
10: original number = (B7-12)/10
11:

```

```

1: Answer to August/September Puzzle
2:
3: INPUT ANY NUMBER : 10
4: multiply by 5 : 50
5: add 5 : 55
6: multiply by 2 : 110
7: add 2 = RESULT : 112
8:
9:
10: original number = 10
11:

```

WINNER—Puzzler #3 October/November Issue

Claude Ostyn
Sitka, Alaska

```

1: A C D E F
2: cruising speed (given) 1000 arbitrary value only
3: maximum speed D1/(4/5) 1250
4: wind speed (D2*2)-D2 1250 West East
5: trip speed D2+D3 2500 West East
6: IF RETURN WAS AT
7: CRUISING AIRSPEED
8:
9: airspeed D1 1000 East West
10: less windspeed D3 1250 West East
11: ground speed D9-D10 -250 into the Atlantic,
12: flying backwards
13: IF RETURN WAS AT
14: MAXIMUM AIRSPEED
15:
16: airspeed D2 1250 East West
17: less windspeed D3 1250 West East
18: ground speed D16-D17 0
19:
20: CONCLUSION: YOU NEVER ARRIVED IN SAN FRANCISCO
YOU NEVER EVEN LEFT NEW YORK!

```

WINNER - Puzzler #1 June/July Issue

David Beckwitt
Anchorage, Alaska

Beckwitt's answer (along with the six other correct answers we received) went into a hat for a drawing for the promised software package: *MuMath*. Adam Osborne himself plucked the winner from the hat and Mr. Beckwitt should receive his software shortly.

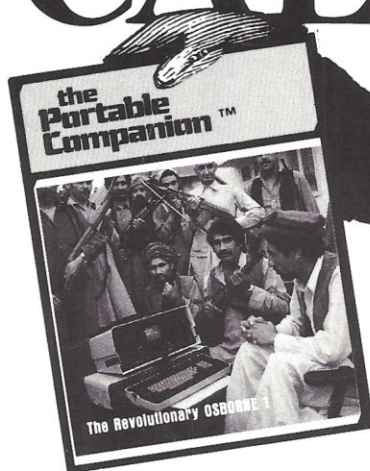
Answer:
Age of Monkey 1.875 years
Age of Mother 28.125 years
Rope Length 1.875'
Rope Weight .625 lbs.
Weight of Monkey 1.757813 lbs.
Weight of Weight 1.757813 lbs.
Weight of Banana 2.98875 ozs.
Length of Banana 1.484375"

See page 76, Aug/Sept issue for the sequence of calculations.)

NOTE: We must cop to an error that was printed in the August/September issue under "Get the Monkey Off Your Back and Start Calculating." We stated that Michael Brassil's answer was erroneous (blush). In fact, he was dead right and his name was dropped into the hat. In addition, readers who came up with Brassil's answer and then made changes to the syntax of the question due to our misleading information were also included. Due to any embarrassment we may have caused Mr. Brassil, we would like to send him a free subscription to the magazine to sooth his spirits. (Unfortunately Mike, we don't have your address so please contact us.)

(The "Monkey Puzzle" is in the public domain. It was previously published in James Fixx's *Games for the Super-Intelligent*, and has circulated amongst Mensa Society puzzle fans.)

We now make **HOUSE CALLS**

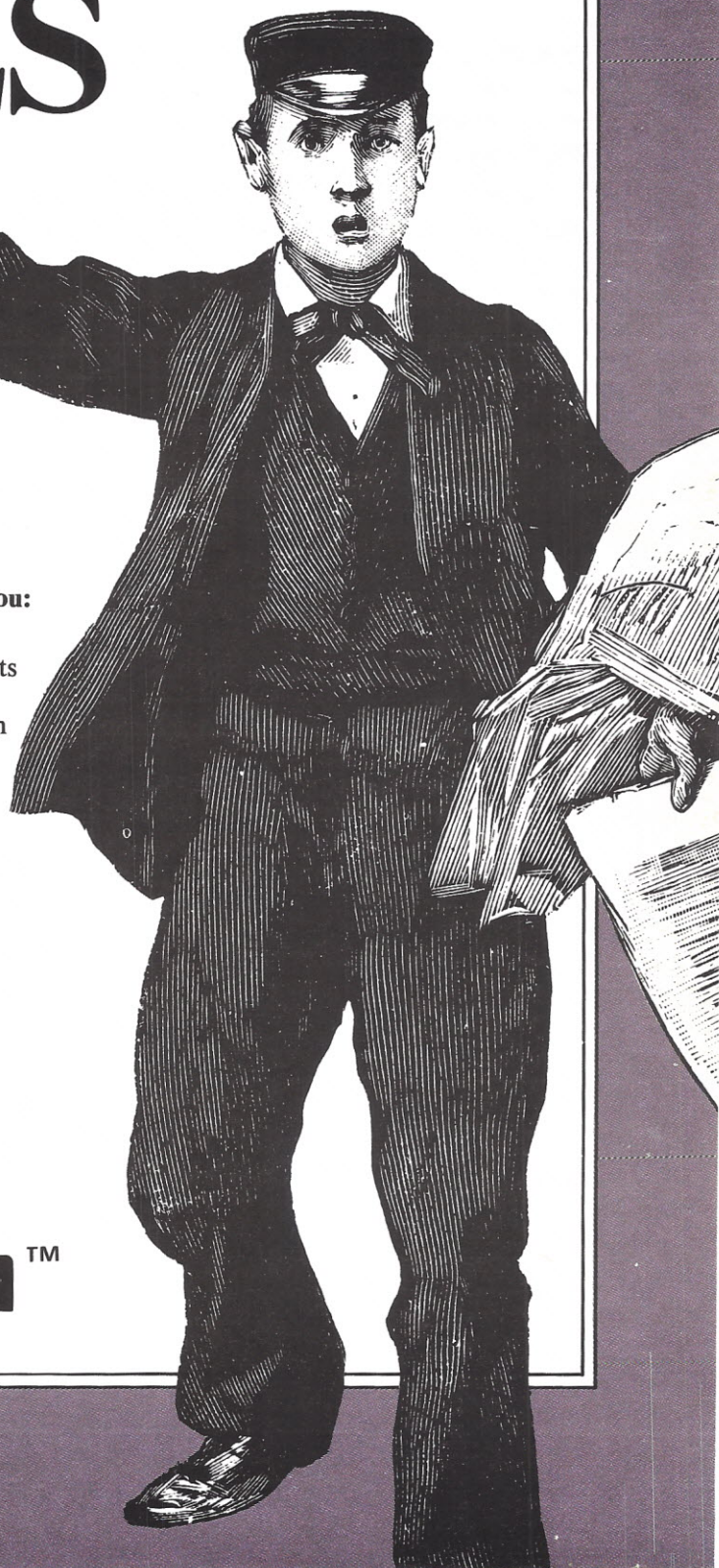


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time*

... *The Portable Companion* includes the first in a short series of articles on practical editing: how to cut, reorder, condense, add and polish your processed words. As a special feature we'll clue you freelance journalists in on how to submit articles electronically to newspapers and magazines. Other articles will include part three of "IO/IO" a screen graphics program and a graphics game in BASIC. We'll be passing on numerous technical tips in a special section devoted to shortcuts, and The Processed Word will concentrate on an evaluation of spelling checkers. Don't miss it.

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Sources

The following computer-related books are available from bookstores or your local Osborne dealer. If you cannot locate a particular book, the publisher's address (where a complete catalog and current price list can be obtained) is included.

GENERAL INTEREST

Osborne User's Guide Applications and Programming *

Leo Conrad
Lance Zimmerman
Larry J. Goldstein

Publisher:

Robert J. Brady Co.
A Prentice-Hall Publishing & Comm. Co.
Bowie, MD 20715

An Introduction to Microcomputers The Beginner's Book

Adam Osborne
David Bunnell

Publisher:

Osborne/McGraw Hill
630 Bancroft Way
Berkeley, CA 94710

WORD PROCESSING

Introduction to WordStar

Arthur Naiman

Publisher:

Sybex
2344 Sixth Street
Berkeley, CA 94710

WordStar Made Easy

Walter A Ettlin

Publisher:

Osborne/McGraw Hill

Introduction to Word Processing

Hal Glatzer

Publisher:

Sybex

BASIC

Microsoft BASIC

Ken Knecht

Publisher:

Dilithium Press
P.O. Box 606
Beaverton, Oregon 97075

WHOOOPS!

In the last issue we printed an incorrect phone number in our listing of remote CP/M bulletin boards. The OXGATE, Mountain View, CA number was shown as (415) 964-4097. IT SHOULD HAVE READ: (415) 965-4097. Unfortunately, the number listed was a private residence. Please correct your list and save these people further hassle.

BASIC Programming for the Financial Executive

Thomas J. Humphrey

Publisher:

John Wiley & Sons, Inc.
605 Third Avenue
New York, N.Y. 10158

CBASIC User Guide

Adam Osborne
Gordon Eubanks Jr.
Martin McNiff

Publisher:

Osborne/McGraw Hill

SUPERCALC

The Power of SuperCalc

Robert E. Williams

Bruce J. Taylor

Publisher:

Management Information Source
1626 N. Vancouver Avenue
Portland, OR 97227

CP/M

The CP/M Handbook

Rodney Zaks

Publisher:

Sybex

Osborne CP/M Users Guide

Thom Hogan

Publisher:

Osborne/McGraw Hill

Using CP/M

Judi N. Fernandez

Ruth Ashley

Publisher:

John Wiley & Sons, Inc.

Mastering CP/M

Alan R. Miller

Publisher:

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